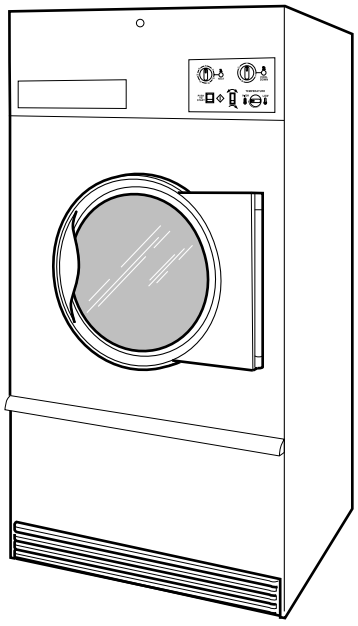
Drying Tumblers

50 Pound Capacity
75 Pound Capacity

Refer to Page 7 for Model Numbers



TMB795C

Troubleshooting

Alliance Laundry Systems

www.comlaundry.com

Part No. 70398301R1
June 2008

Table of Contents

Section 1
Safety Information

Throughout this manual and on machine decals, you will find precautionary statements ("CAUTION", "WARNING", and "DANGER") followed by specific instructions. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

DANGER

Danger indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.

WARNING

Warning indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.

CAUTION

Caution indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.

Additional precautionary statements ("IMPORTANT" and "NOTE") are followed by specific instructions.

IMPORTANT: The word "IMPORTANT" is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE: The word "NOTE" is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

In the interest of safety, some general precautions relating to the operation of this machine follow.

WARNING

- **Failure to install, maintain and/or operate this product according to the manufacturer's instructions may result in conditions which can produce serious injury, death and/or property damage.**
- **Do not repair or replace any part of the product or attempt any servicing unless specifically recommended or published in this Service Manual and unless you understand and have the skills to carry out the servicing.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the product is properly grounded and to reduce the risk of fire, electric shock, serious injury or death.**

W006R2

IMPORTANT INFORMATION: During the lifetime of a tumbler, it may require service. The information contained in this manual was written and is intended for use by qualified service technicians who are familiar with the safety procedures required in the repair of a tumbler, and who are equipped with the proper tools and testing equipment.

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- **Disconnect electric power to the tumbler before servicing.**
- **Never start the tumbler with any guards/ panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W240

WARNING

Repairs that are made to your products by unqualified persons can result in hazards due to improper assembly or adjustments subjecting you or the inexperienced person making such repairs to the risk of serious injury, electrical shock or death.

W007

CAUTION

If you or an unqualified person perform service on your product, you must assume the responsibility for any personal injury or property damage which may result. The manufacturer will not be responsible for any injury or property damage arising from improper service and/or service procedures.

W008

NOTE: The WARNING and IMPORTANT instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which CANNOT be built into this tumbler. These factors MUST BE supplied by the person(s) installing, maintaining or operating the tumbler.

Always contact your dealer, distributor, service agent or the manufacturer on any problems or conditions you do not understand.

Locating an Authorized Service Person

Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

Warranty service must be performed by an authorized technician, using authorized factory parts. If service is required after the warranty expires, Alliance Laundry Systems also recommends contacting an authorized technician and using authorized factory parts.

Safety Warnings and Decals

SAFETY WARNINGS and decals have been provided in key locations to remind you of important precautions for the safe operation and maintenance of your tumbler. Please take the time to review these warnings before proceeding with service work.

All decals have been designed and applied to withstand washing and cleaning. Decals should be checked periodically to be sure they have not been damaged, removed, or painted.

Safety Precautions for Servicing Tumblers

Prior to servicing tumbler:

- **Disconnect electrical service and "lockout" to prevent unintentional connection.**
- **Shut off supply gas valve.**
- **Allow machine to cool prior to servicing.**

After servicing tumbler:

- **Control/access panels must be reinstalled.**
- **Motor/drive/belt guards must be reinstalled.**
- **Contactor/junction/accessory box covers must be reinstalled.**
- **Use a non-corrosive leak detection solution to check all pipe connections for gas leaks. DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS!**
- **The loading door switch, lint door switch and airflow switch must be operating properly.**

Section 2
Introduction

Model Identification

Information in this manual is applicable to these models:

	Gas			Steam/Thermal Oil		Electric
50 Pound	AT050L	HT050D	PA050L	AT050S	KT050T	AT050E
	AT050N	HT050L	PA050N	BT050T	KU050S	CHD50E2-CT050E
	CHD50G2-CA050L	HT050N	PT050L	BU050T	KU050T	CHD50E2-CU050E
	CHD50G2-CA050N	HU050L	PT050N	CHD50S2-CT050S	LT050S	DR50E2-BT050E
	CHD50G2-CT050L	HU050N	PU050L	CHD50S2-CU050S	LT050T	DR50E2-BU050E
	CHD50G2-CT050N	IPD50G2-IT050L	PU050N	CT050T	LU050S	GT050E
	CHD50G2-CU050L	IPD50G2-IT050N	SA050L	CU050T	LU050T	GU050E
	CHD50G2-CU050N	KA050L	SA050N	DR50S2-BT050S	PT050S	HT050E
	DR50G2-BA050L	KA050N	ST050D	DR50S2-BU050S	PT050T	HU050E
	DR50G2-BA050N	KT050L	ST050L	GT050S	PU050S	IPD50E2-IT050E
	DR50G2-BT050L	KT050N	ST050N	GT050T	PU050T	KT050E
	DR50G2-BT050N	KU050L	SU050L	GU050S	ST050S	KU050E
	DR50G2-BU050L	KU050N	SU050N	GU050T	ST050T	LT050E
	DR50G2-BU050N	LA050L	UA050L	HT050S	SU050S	LU050E
	GA050L	LA050N	UA050N	HT050T	SU050T	PT050E
	GA050N	LT050L	UT050L	HU050S	UT050S	PU050E
	GT050L	LT050N	UT050N	HU050T	UT050T	ST050E
	GT050N	LU050L	UU050L	IPD50S2-IT050S	UU050S	SU050E
	GU050L	LU050N	UU050N	IT050T	UU050T	UT050E
	GU050N	NT050L	YT050L	KT050S	YT050S	UU050E
	HA050L	NT050N	YT050N		YT050T	YT050E
	HA050N					

(continued)

NOTE: Control suffixes listed on next page.

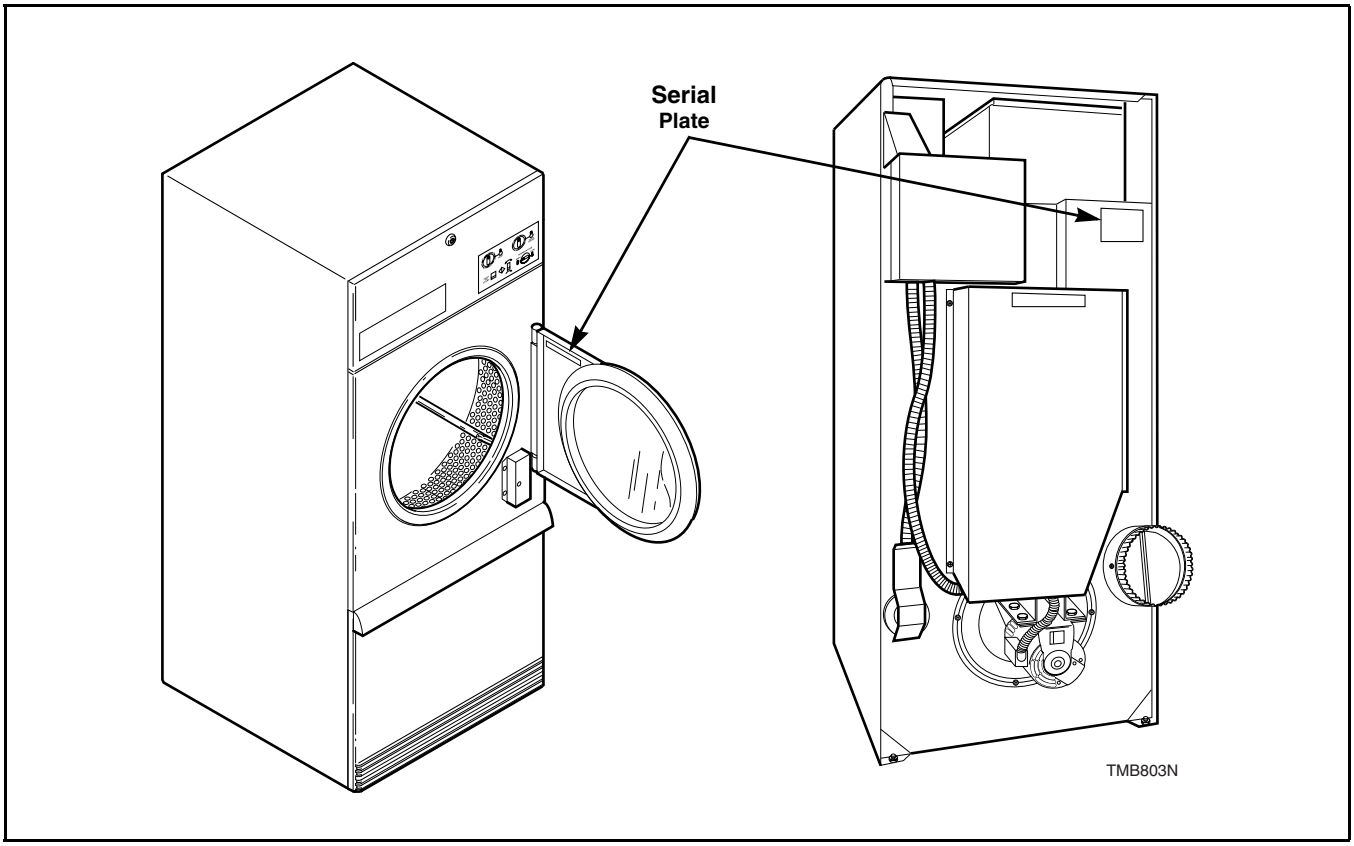
	Gas			Steam/Thermal Oil		Electric
75 Pound	AT075L	HT075L	PT075N	AT075S	KU075T	AT075E
	AT075N	HT075N	PU075L	BT075T	LT075S	CHD75E2-CT075E
	CHD75G2-CA075L	HU075L	PU075N	BU075T	LT075T	CHD75E2-CU075E
	CHD75G2-CA075N	HU075N	SA075L	CHD75S2-CT075S	LU075S	DR75E2-BT075E
	CHD75G2-CT075L	IPD75G2-IT075L	SA075N	CHD75S2-CU075S	LU075T	DR75E2-BU075E
	CHD75G2-CT075N	IPD75G2-IT075N	ST075D	CT075T	PT075S	GT075E
	CHD75G2-CU075L	KA075L	ST075L	CU075T	PT075T	GU075E
	CHD75G2-CU075N	KA075N	ST075N	DR75S2-BT075S	PU075S	HT075E
	DR75G2-BA075L	KT075L	STF75L	DR75S2-BU075S	PU075T	HU075E
	DR75G2-BA075N	KT075N	STF75N	GT075S	ST075S	IPD75E2-IT075E
	DR75G2-BT075L	KU075L	SU075L	GT075T	ST075T	KT075E
	DR75G2-BT075N	KU075N	SU075N	GU075S	SU075S	KU075E
	DR75G2-BU075L	LA075L	UA075L	GU075T	SU075T	LT075E
	DR75G2-BU075N	LA075N	UA075N	HT075S	UT075S	LU075E
	GA075L	LT075L	UT075L	HT075T	UT075T	PT075E
	GA075N	LT075N	UT075N	HU075S	UU075S	PU075E
	GT075L	LU075L	UTF75L	HU075T	UU075T	ST075E
	GT075N	LU075N	UTF75N	IPD75S2-IT075S	YT075S	SU075E
	GU075L	NT075L	UU075L	IT075T	YT075T	UB075E
	GU075N	NT075N	UU075N	KT075S	YU075S	UT075E
	HA075L	PA075L	YT075L	KT075T	YU075T	UU075E
	HA075N	PA075N	YT075N	KU075S		YT075E
	HT075D	PT075L				YU075E

Includes models with the following control suffixes:

3O - DX4 OPL
3V - DX4 vended
3X - DX4 prep for coin
BC - basic electronic, coin
BL - basic electronic, central pay
BX - basic electronic, prep for coin
BY - basic electronic, prep for card
CD - rotary coin drop
CX - prep for coin
CY - prep for card
DO - DMP OPL
DV - DMP vended
DX - DMP prep for coin
MT - manual timer
NC - NetMaster coin
NR - NetMaster card
NX - NetMaster, prep for coin
NY - NetMaster, prep for card
OM - OPL micro
QT - dual digital timer
R3 - reversing DX4 OPL
RD - reversing DMP OPL
RM - reversing OPL micro
RQ - reversing dual digital timer
RT - reversing manual timer
SD - single drop
SX - single drop, prep for coin
ZC - NetMaster network, coin
ZR - NetMaster network, card
ZX - NetMaster network, prep for coin
ZY - NetMaster network, prep for card

Serial Plate Location

When calling or writing about your product, be sure to mention model and serial numbers. Model and serial numbers are found on serial plate on the rear of machine and inside door.



Customer Service

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name and address of the nearest authorized parts distributor.

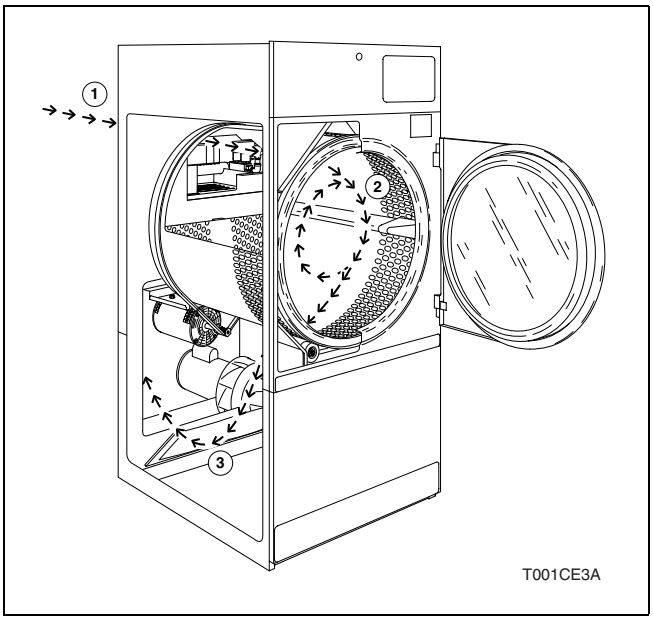
For technical assistance, call (920) 748-3121.

Wiring Diagram

The wiring diagram is located inside the junction or contactor box.

Models starting Serial No. 0309____ or later will have the wiring diagram part number in the lower portion of the electrical data on the serial plate.

How a Tumbler Works



A tumbler uses heated air to dry loads of laundry.

(1) When the motor is started, the exhaust fan pulls room temperature air in through the air intake at the rear of the tumbler and over the heat source (burner flame for gas, heating element for electric, and coil for steam).

(2) The heated air moves into the cylinder, where it is circulated through the wet load by the tumbling action of the cylinder.

(3) The air then passes through the lint filter, exhaust fan, and is vented to the outdoors.

Theory of Operation of Instant Electronic Ignition

IMPORTANT: The Non-CE Marked Instant Electronic Ignition system will attempt to light the gas by sparking for approximately 15 seconds. If gas ignition does not take place within approximately 15 seconds, the Instant Electronic Ignition control will go into safety lockout and the valve will no longer open until Instant Electronic Ignition control is reset. To reset Instant Electronic Ignition control, remove power from control by opening and closing the tumbler door. If condition persists, check that the gas shut-off valve is in "on" position and that the gas service is properly connected.

If condition persists:

1. Check resistance of high tension lead (approximately 1000 ohms/inch), and replace if not within resistance range.
2. Check voltage present at valve.
3. Check that machine is properly grounded.
4. Check the gap between igniter and burner tube (gap should be 1/4-3/8 inch).
5. Check that burner ports are not blocked or plugged under the igniter.

Section 3
Troubleshooting

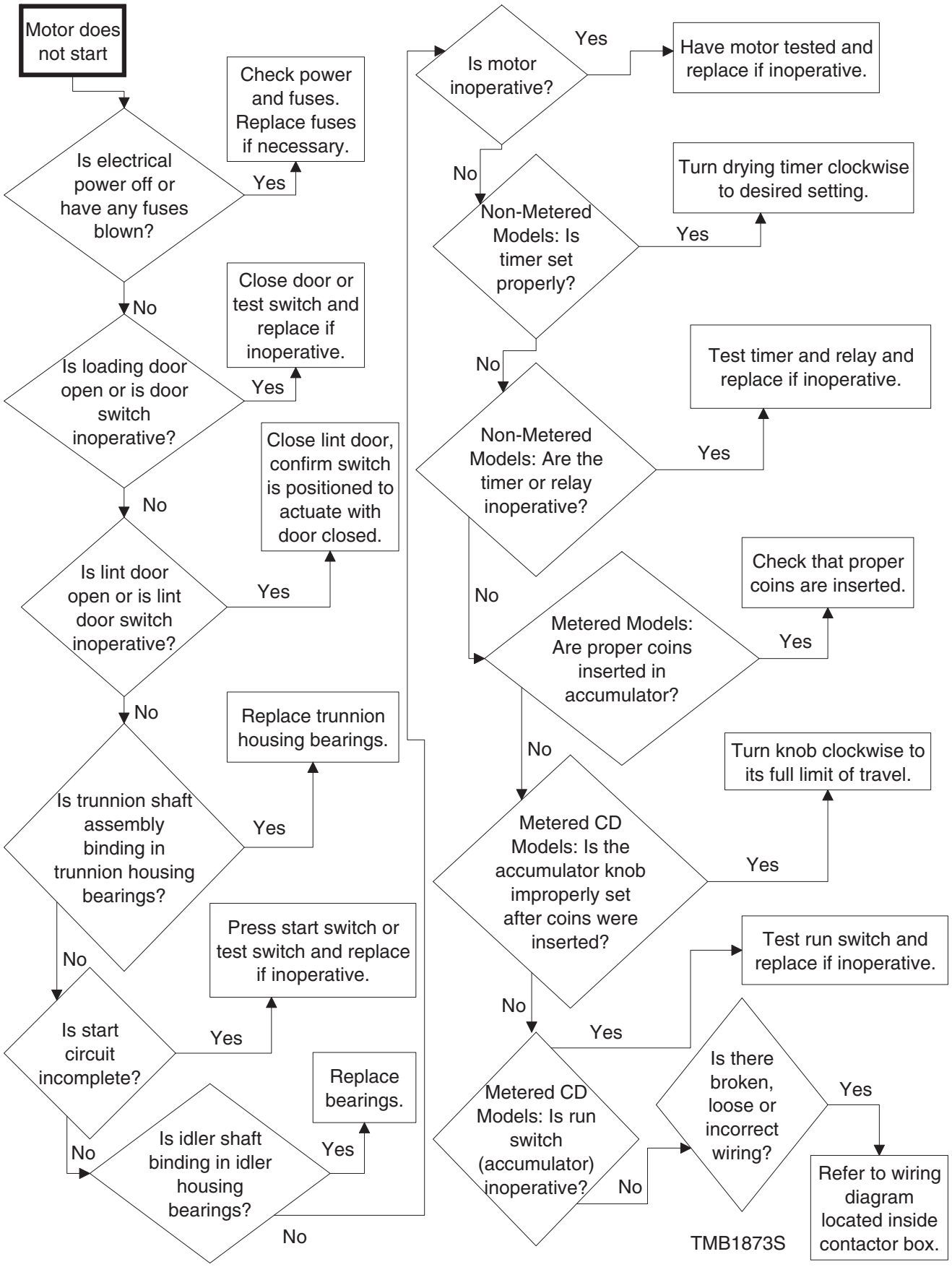
WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

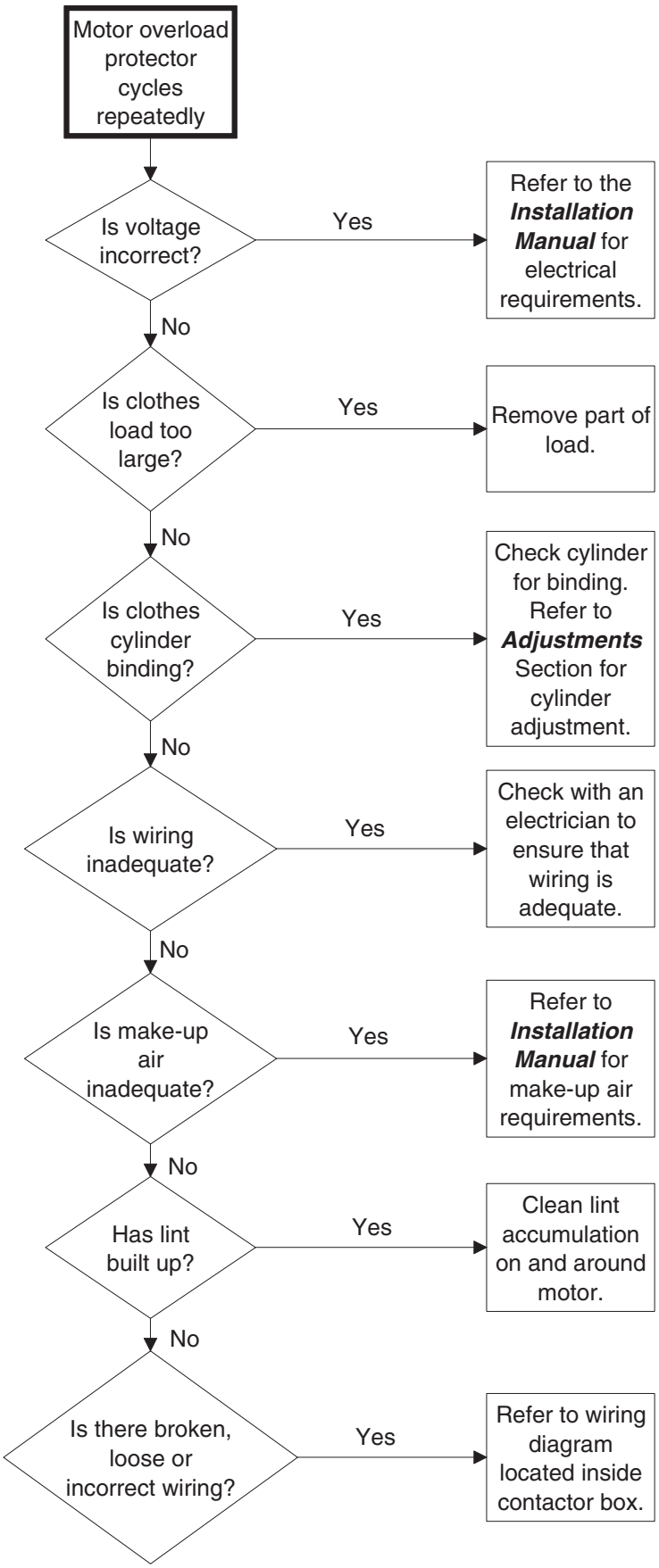
W002

IMPORTANT: Refer to appropriate wiring diagram for aid in testing tumbler components.

1. Motor Does Not Start

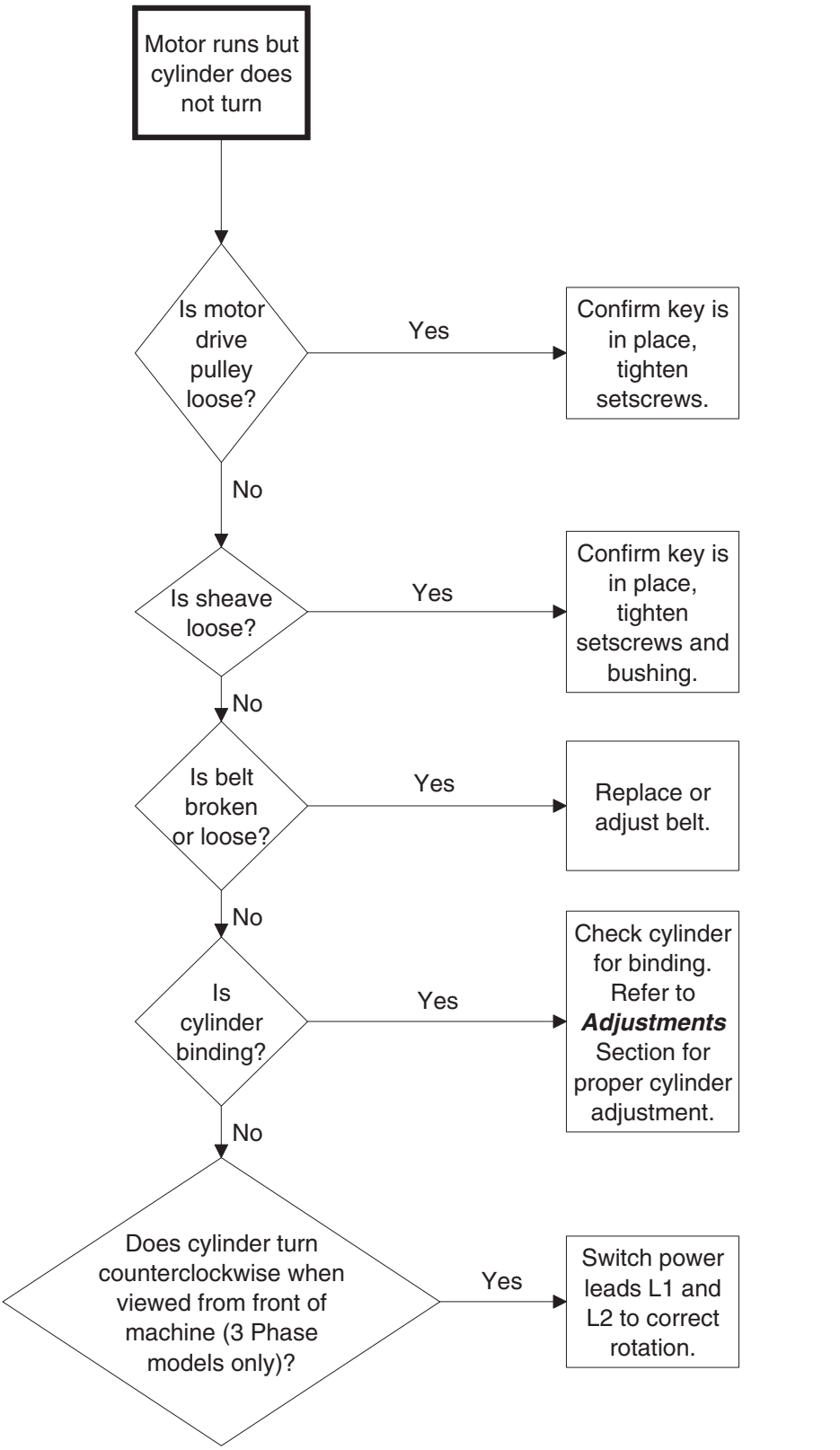


2. Motor Overload Protector Cycles Repeatedly



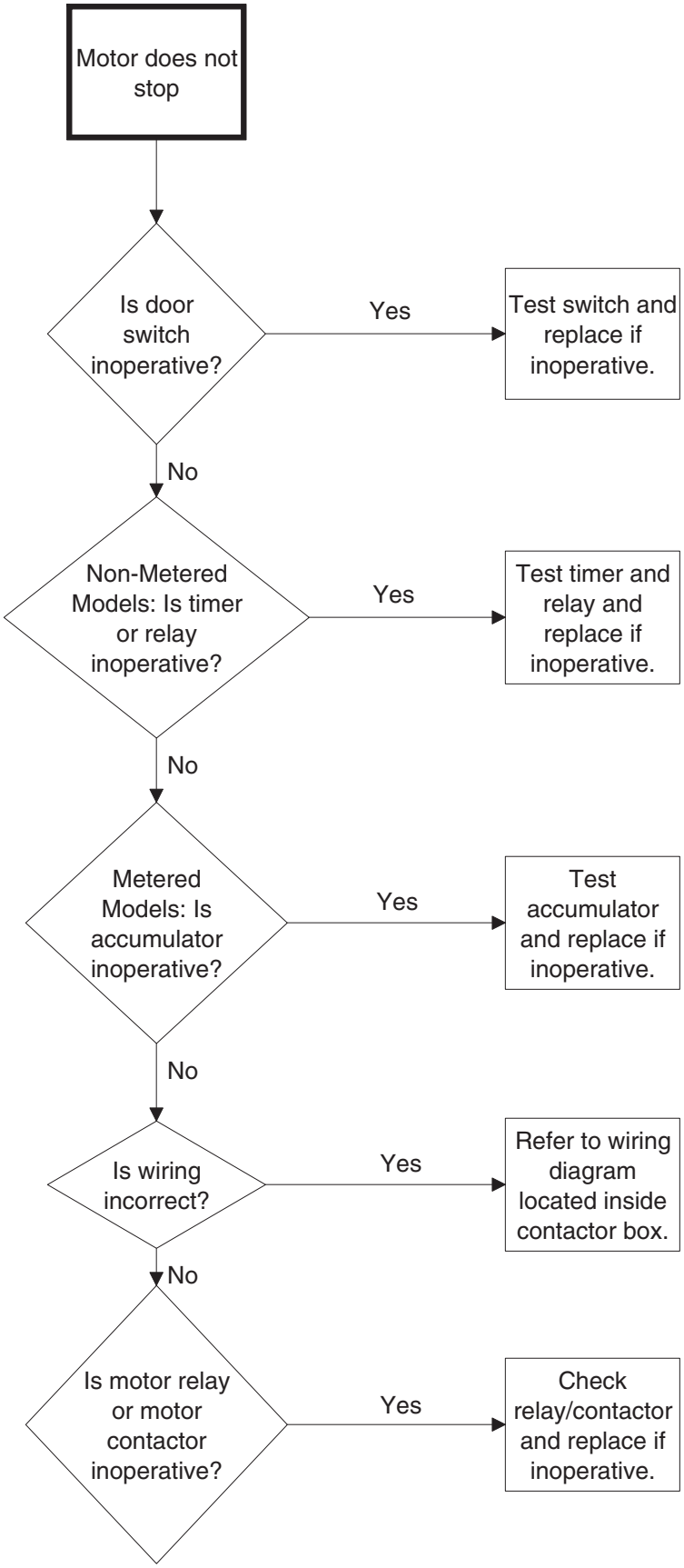
TMB1874S

3. Motor Runs But Cylinder Does Not Turn



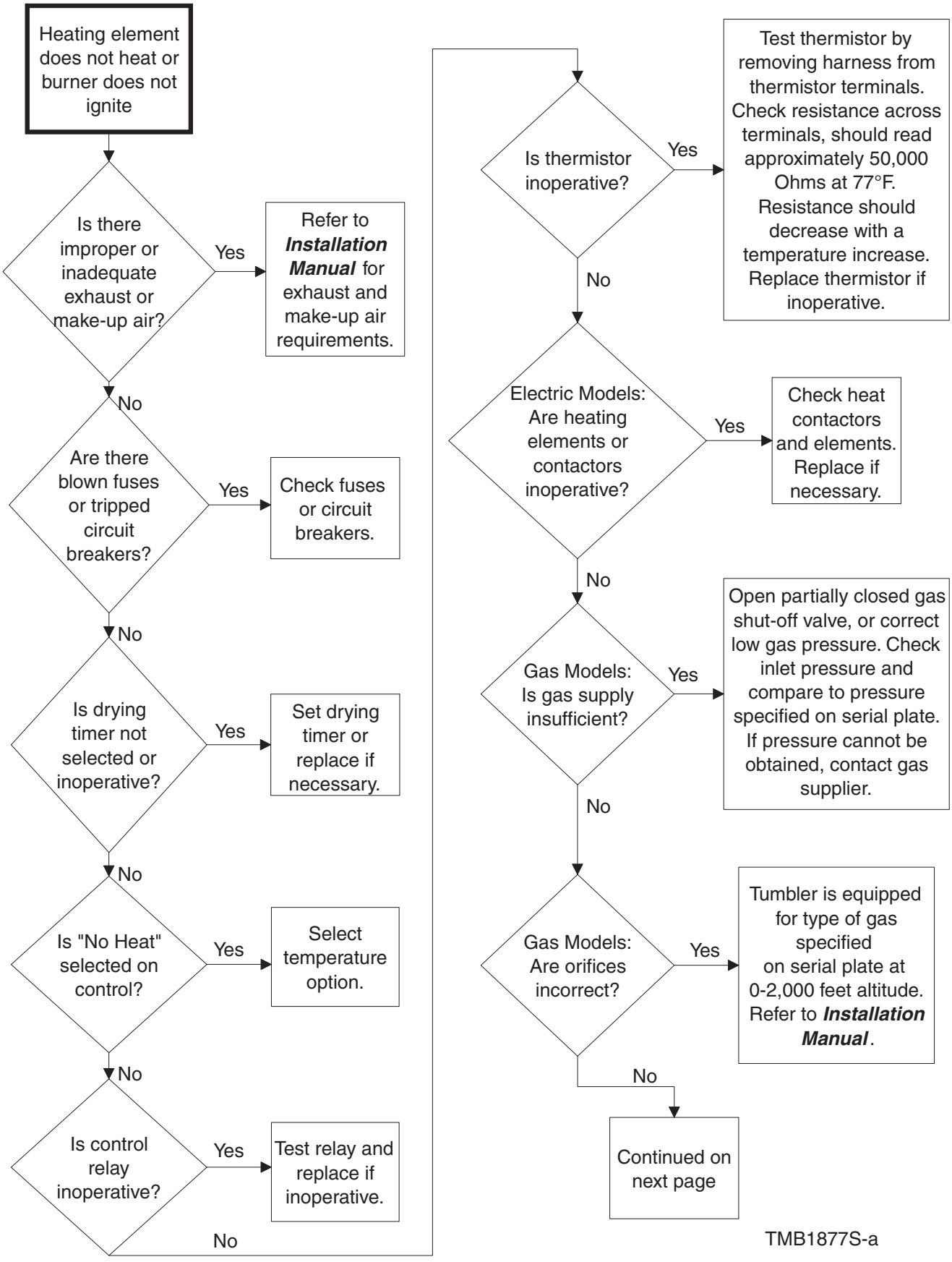
TMB1875S

4. Motor Does Not Stop

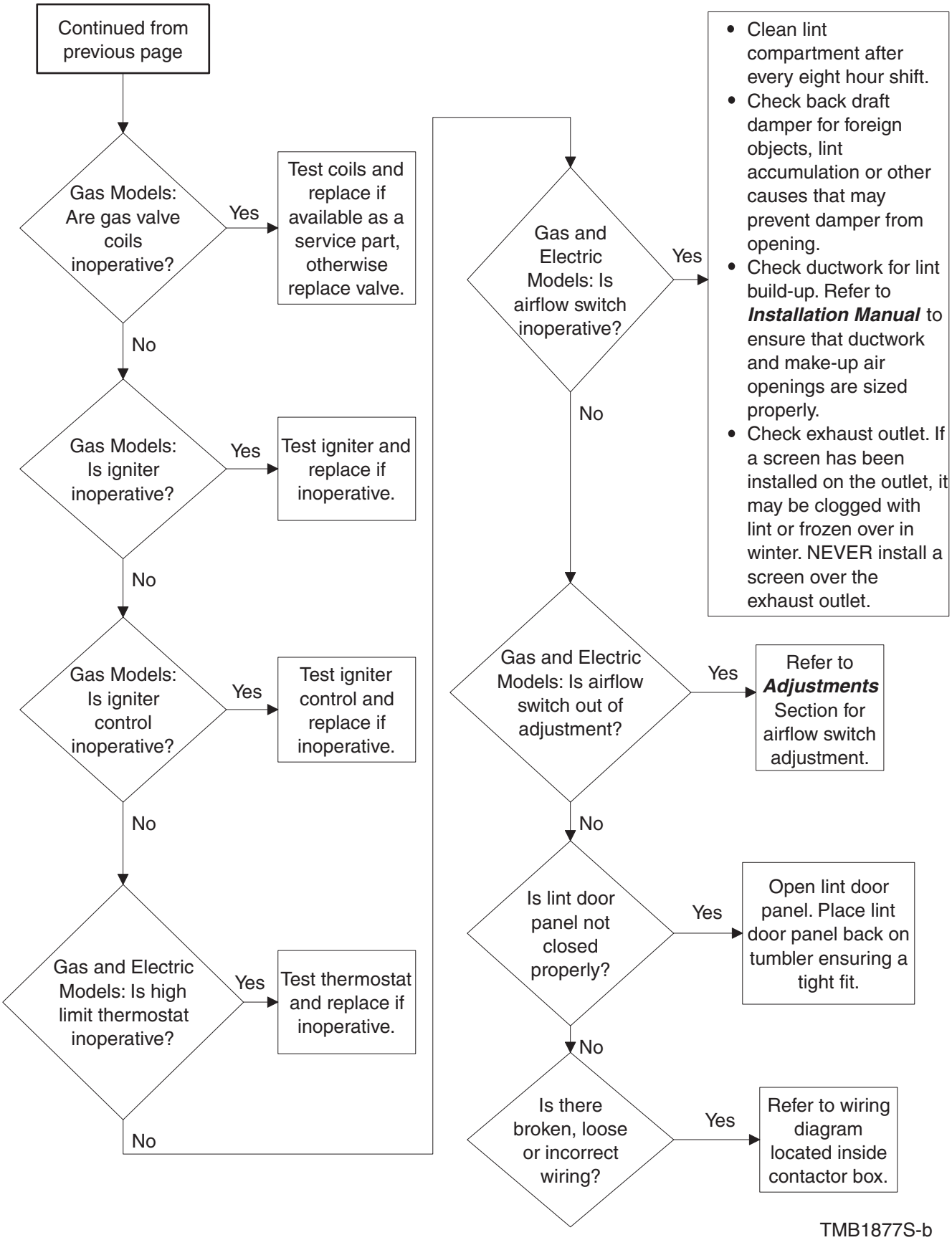


TMB1876S

5. Heating Element Does Not Heat or Burner Does Not Ignite

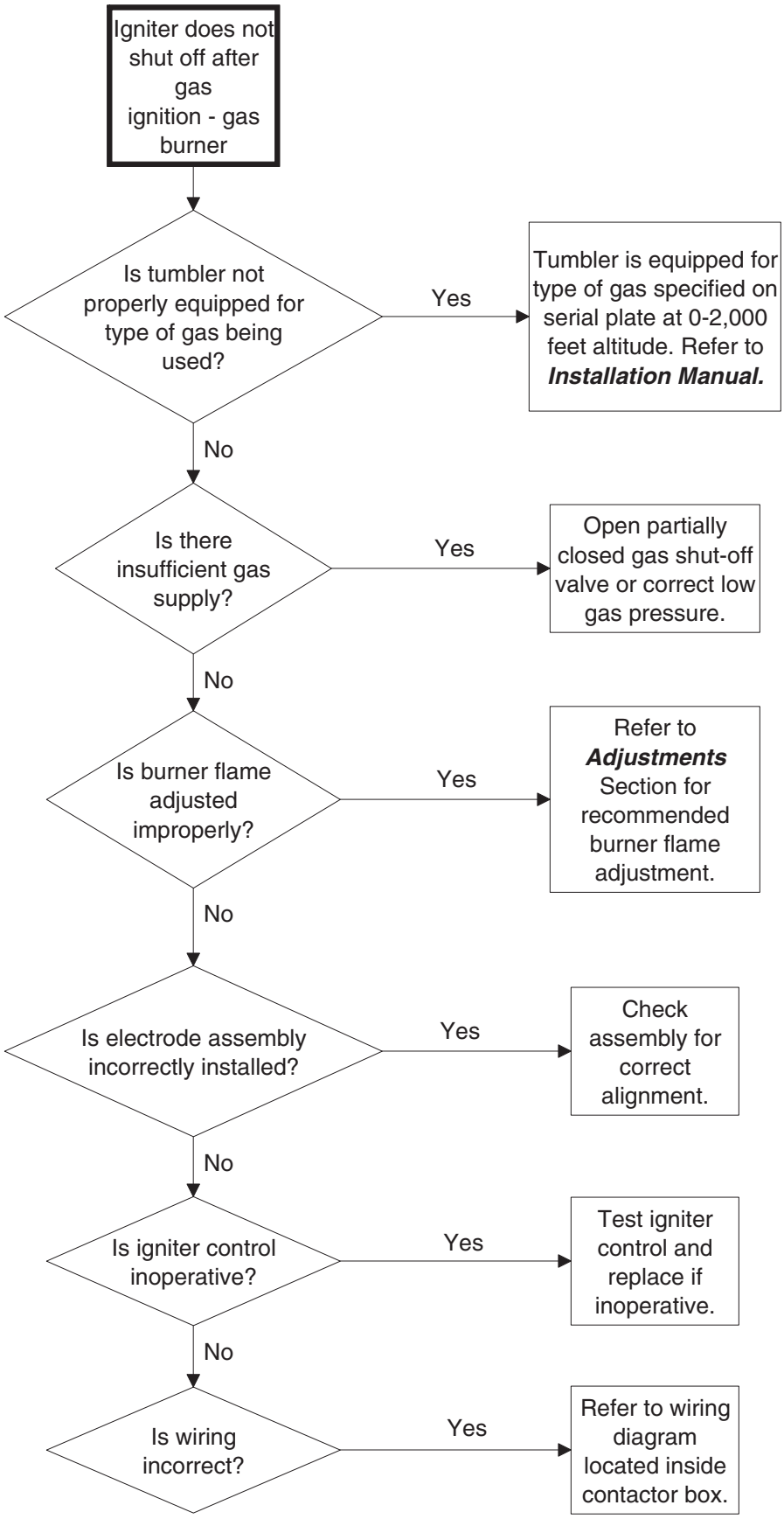


5. Heating Element Does Not Heat or Burner Does Not Ignite (continued)



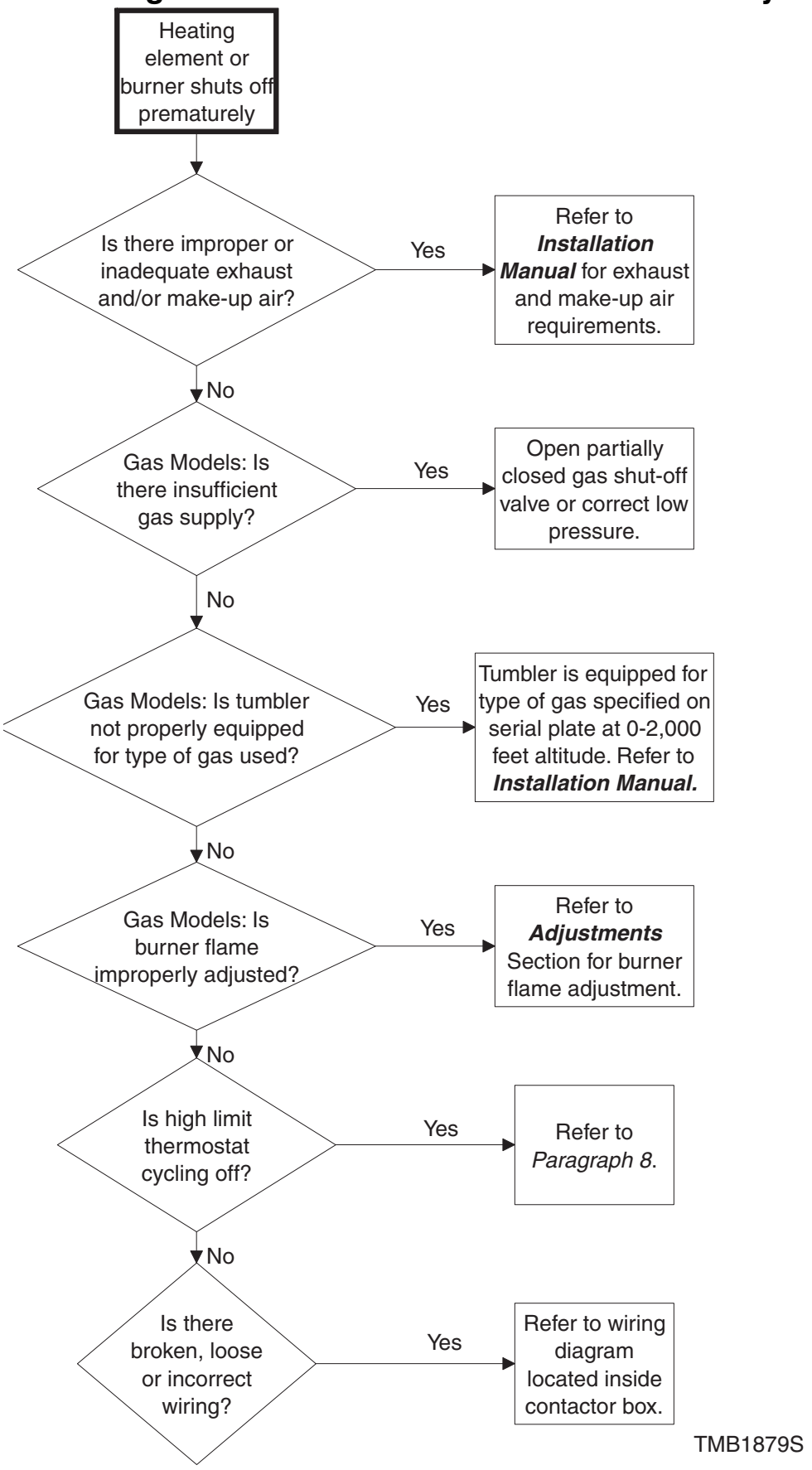
TMB1877S-b

6. Igniter Does Not Shut Off After Gas Ignition — Gas Burner



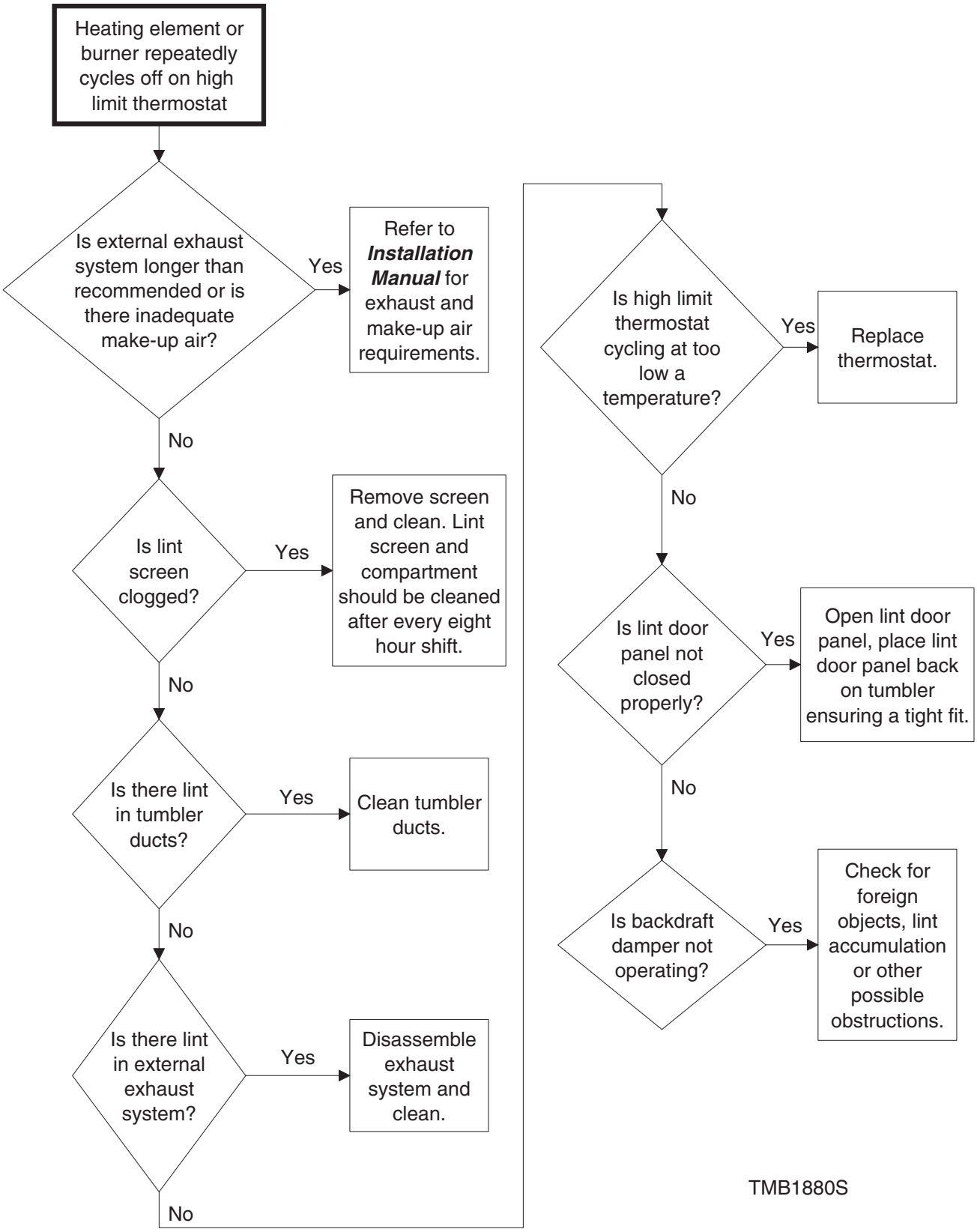
TMB1878S

7. Heating Element or Burner Shuts Off Prematurely

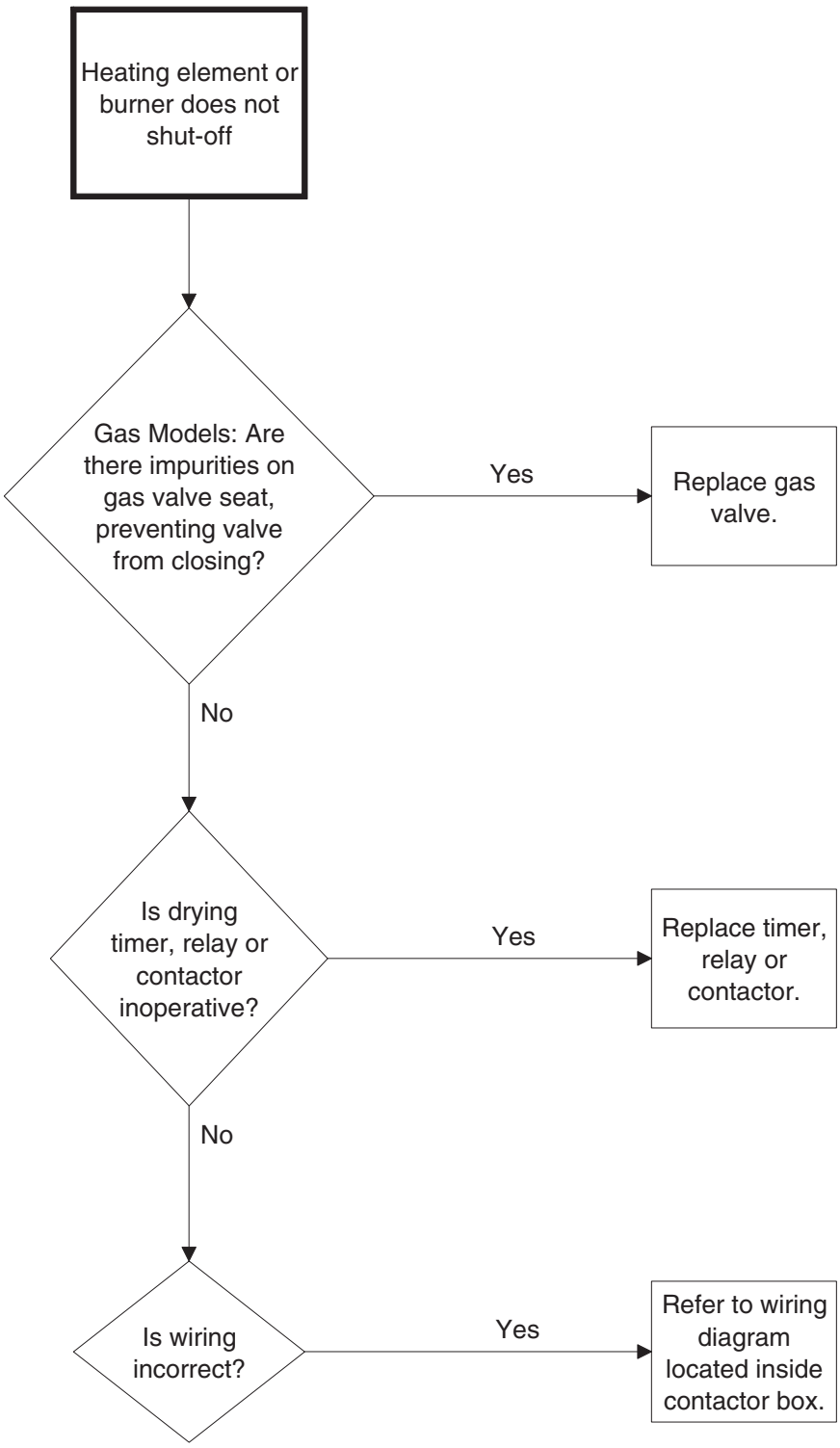


TMB1879S

8. Heating Element or Burner Repeatedly Cycles Off On High Limit Thermostat

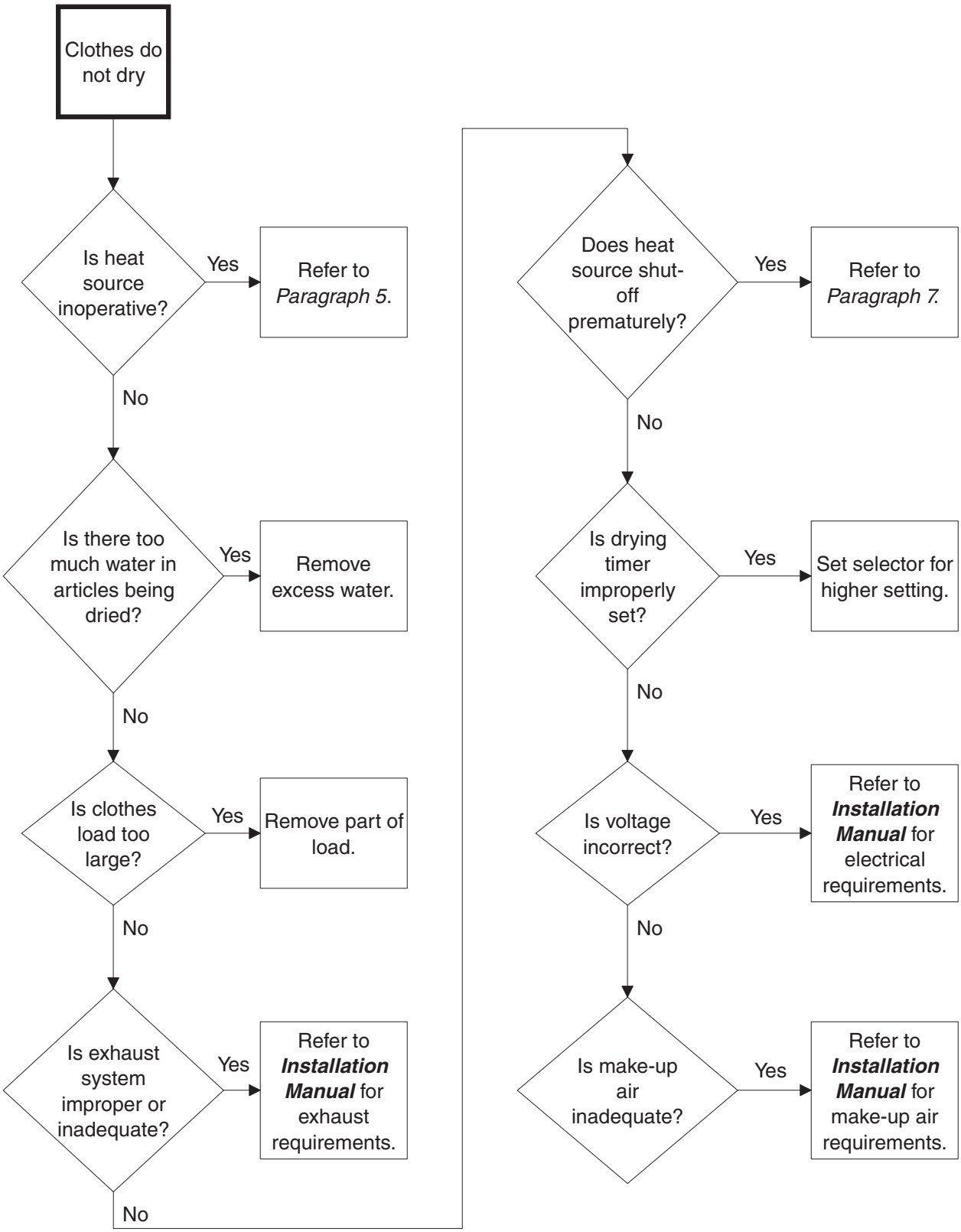


9. Heating Element or Burner Does Not Shut-Off



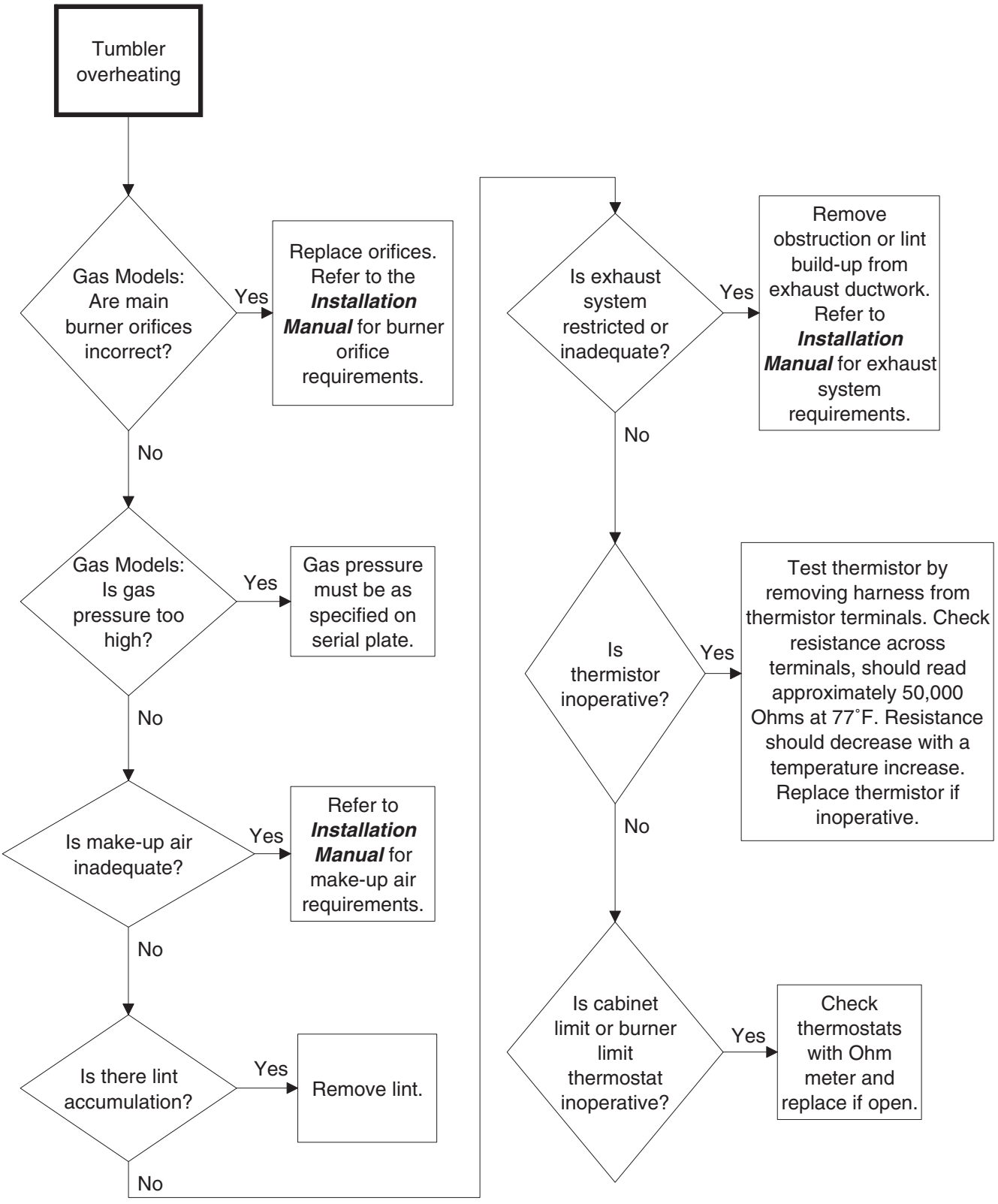
TMB1881S

10. Clothes Do Not Dry



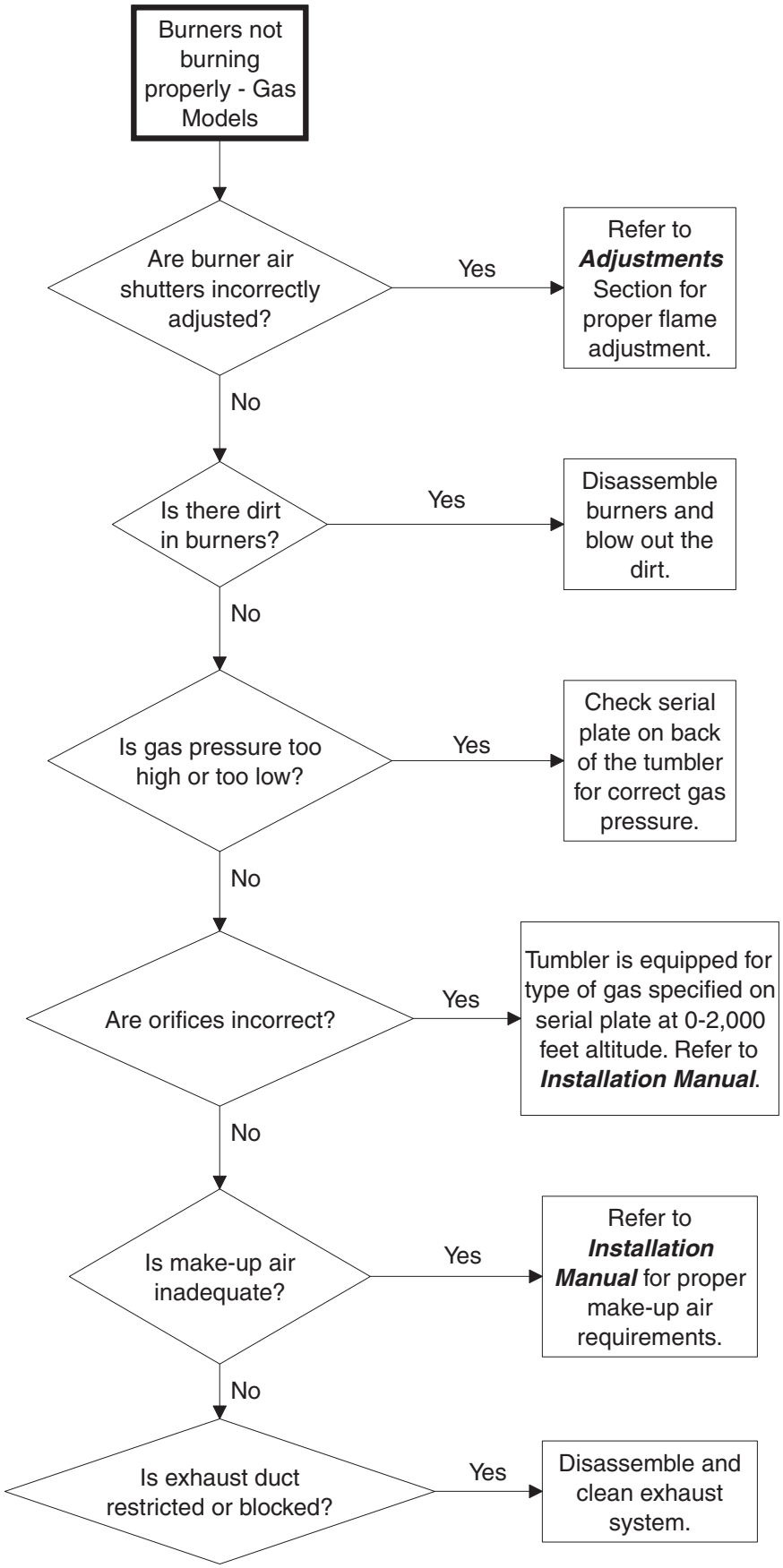
TMB1882S

11. Tumbler Overheating



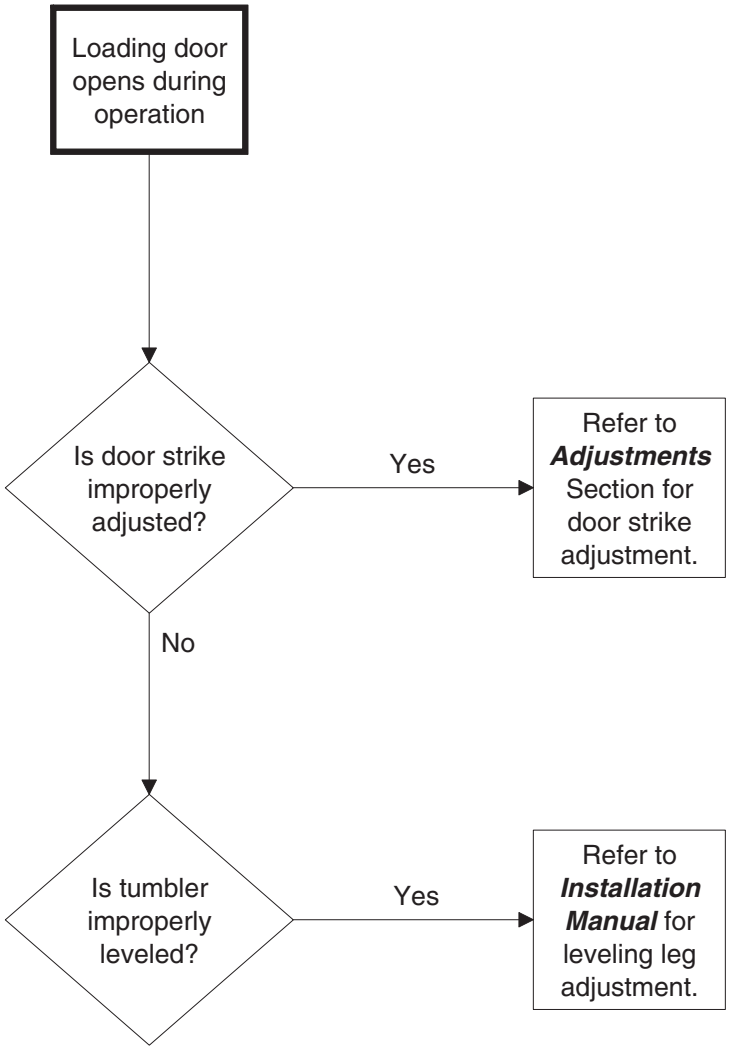
TMB1883S

12. Burners Not Burning Properly — Gas Models



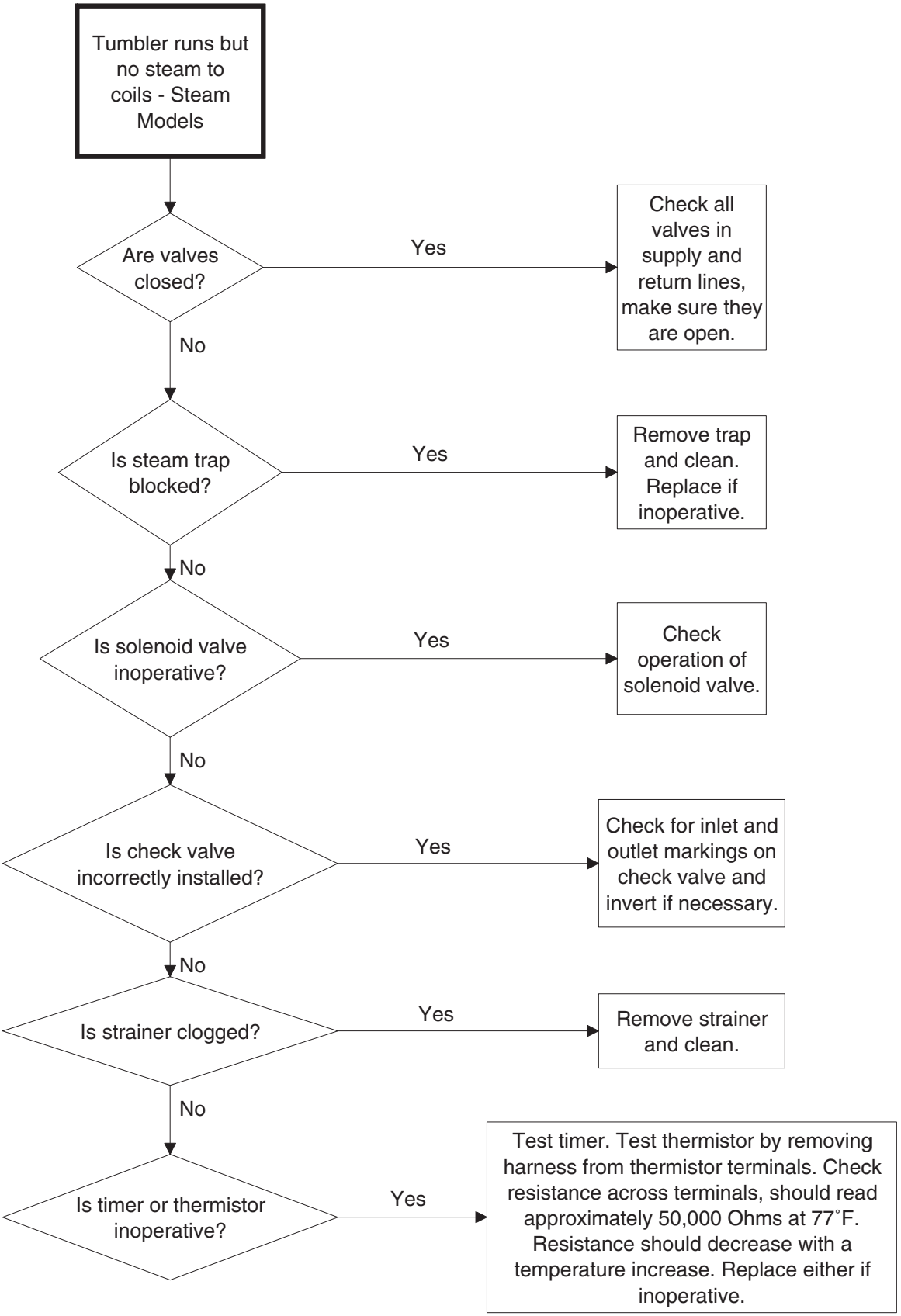
TMB1884S

13. Loading Door Opens During Operation



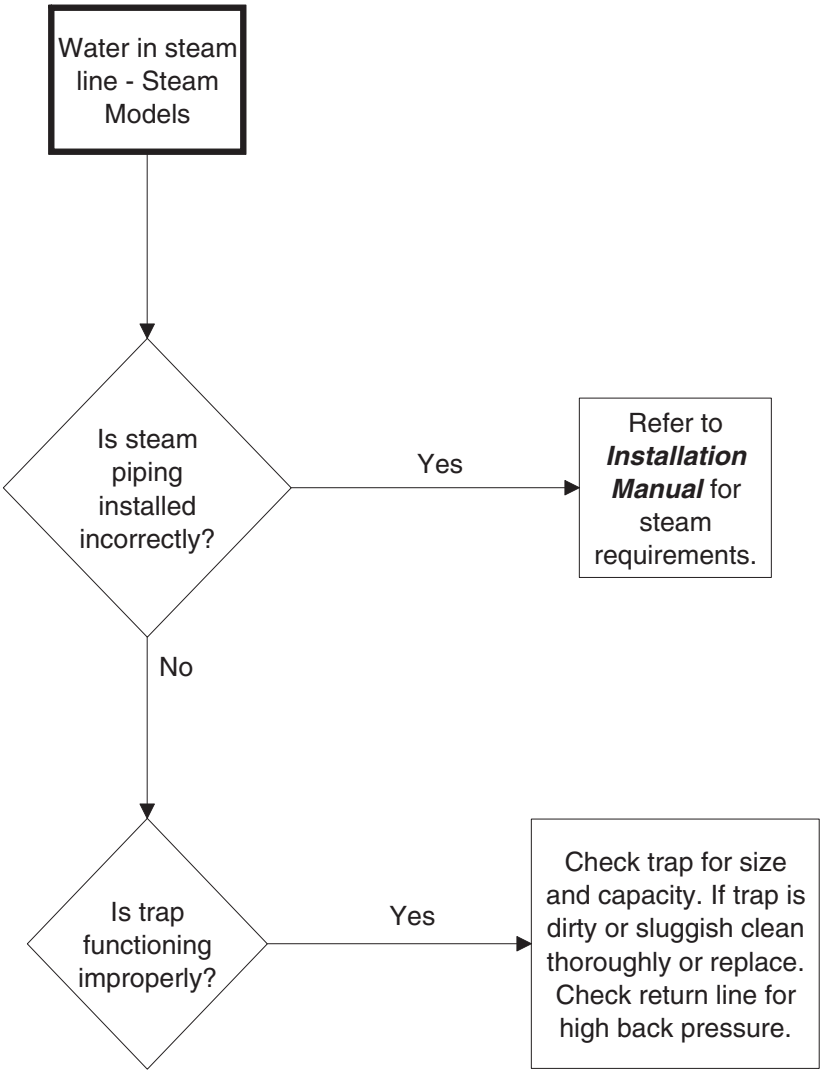
TMB1885S

14. Tumbler Runs But No Steam To Coils — Steam Models



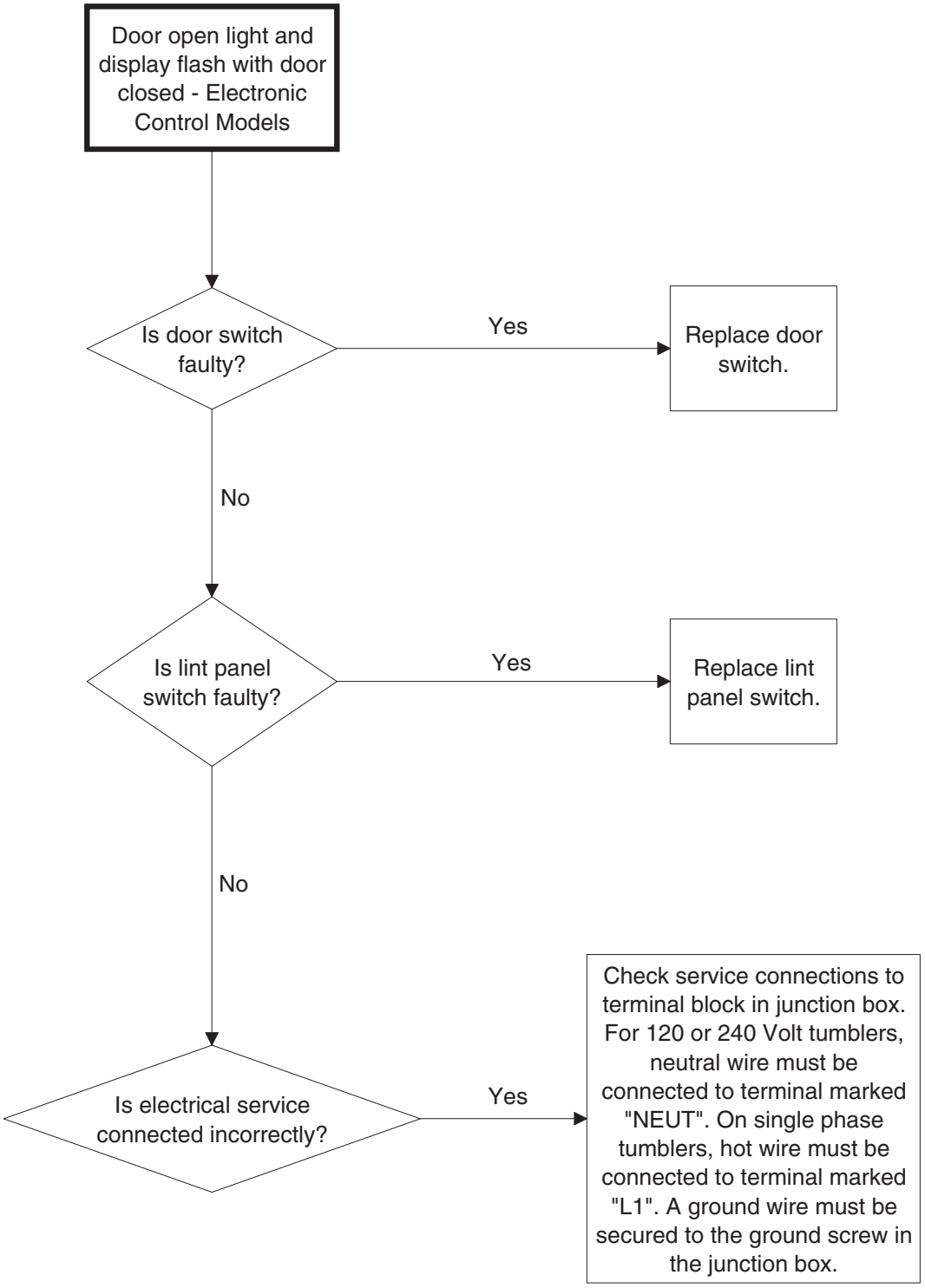
TMB1886S

15. Water In Steam Line — Steam Models



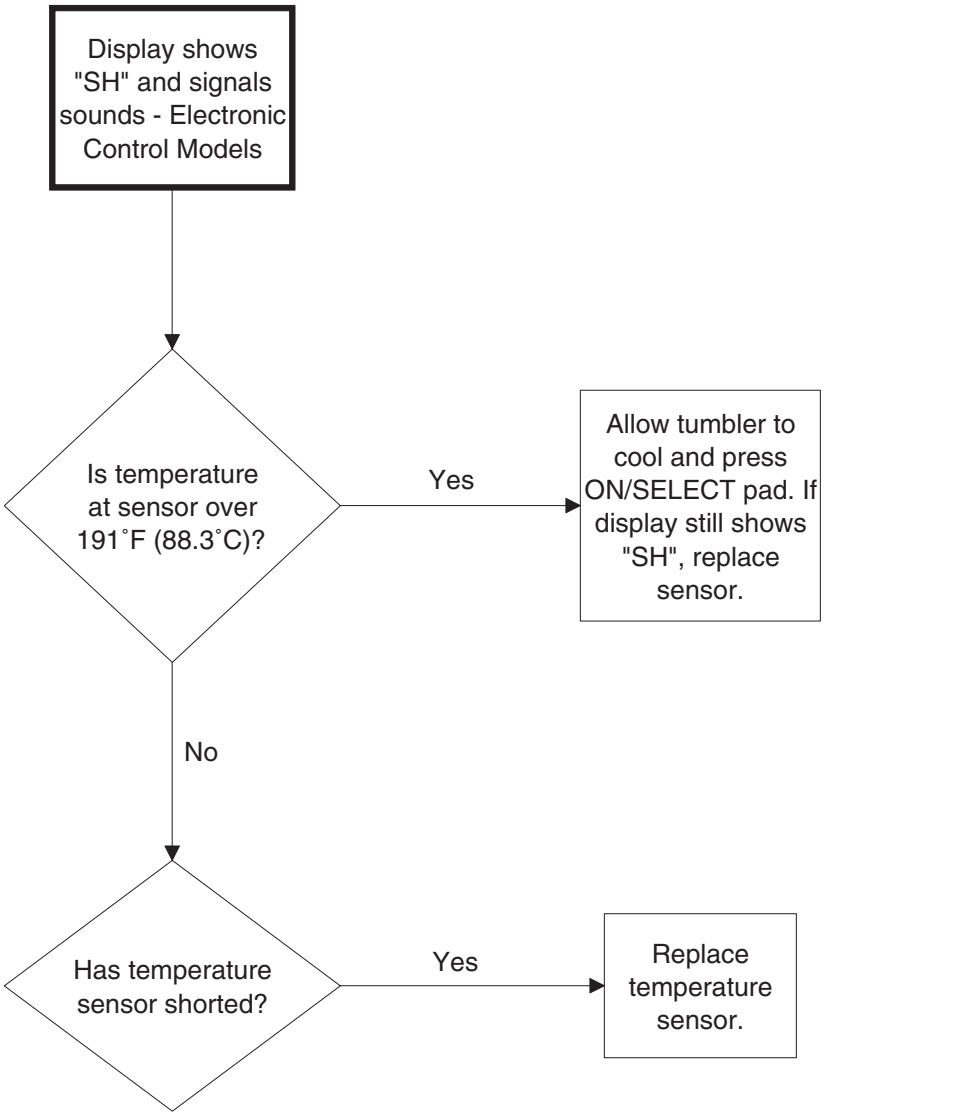
TMB1887S

16. Door Open Light and Display Flash With Door Closed – Electronic Control Models



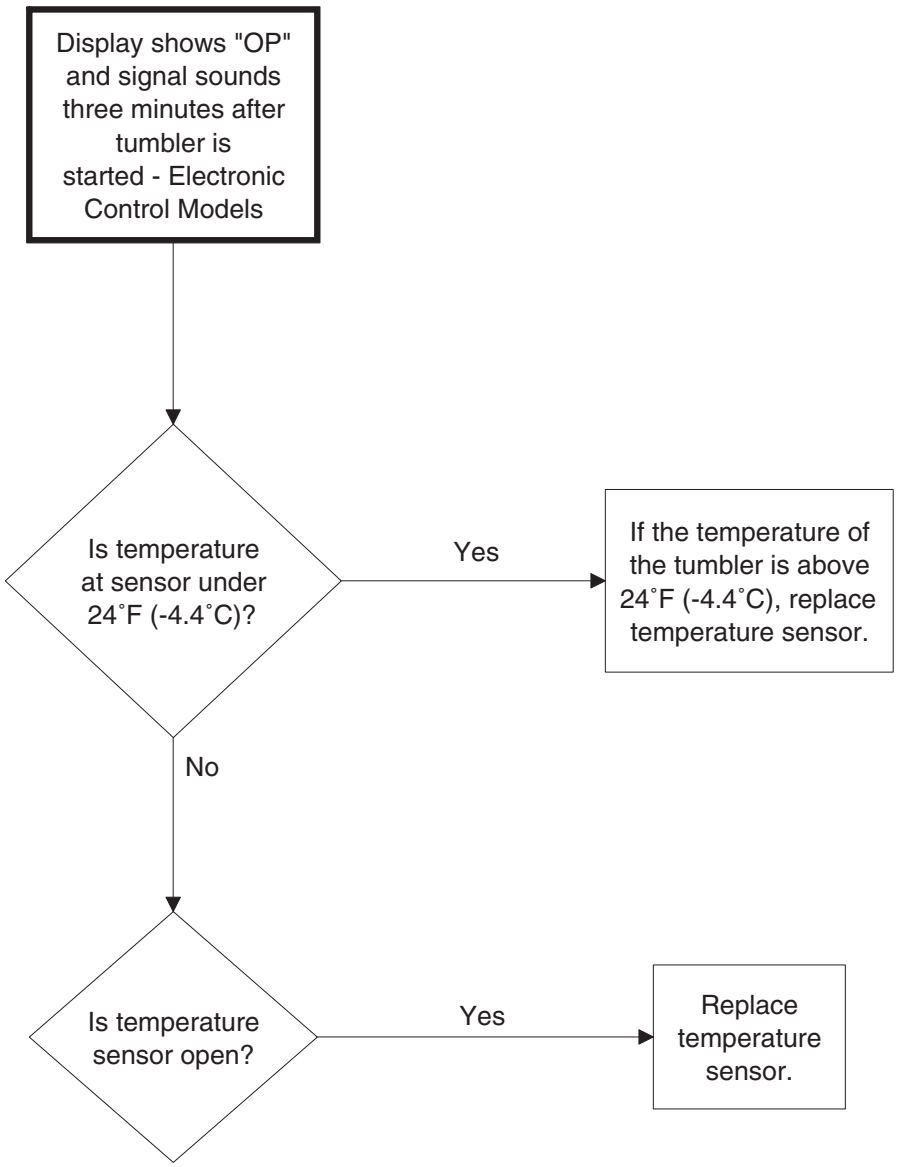
TMB1888S

17. Display Shows “SH” and Signals Sounds – Electronic Control Models



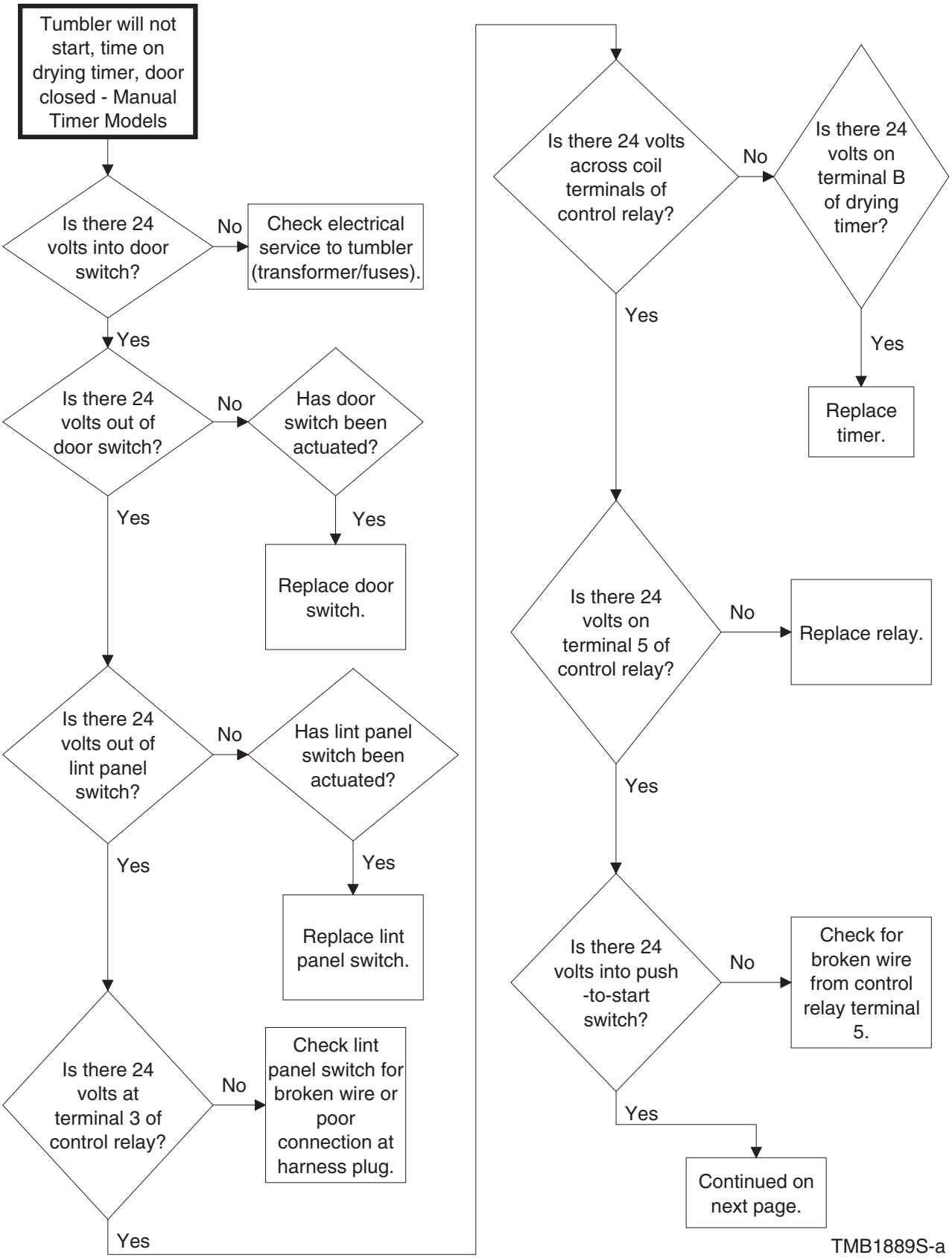
TMB1916S

18. Display Shows “OP” and Signal Sounds Three Minutes After Tumbler is Started – Electronic Control Models



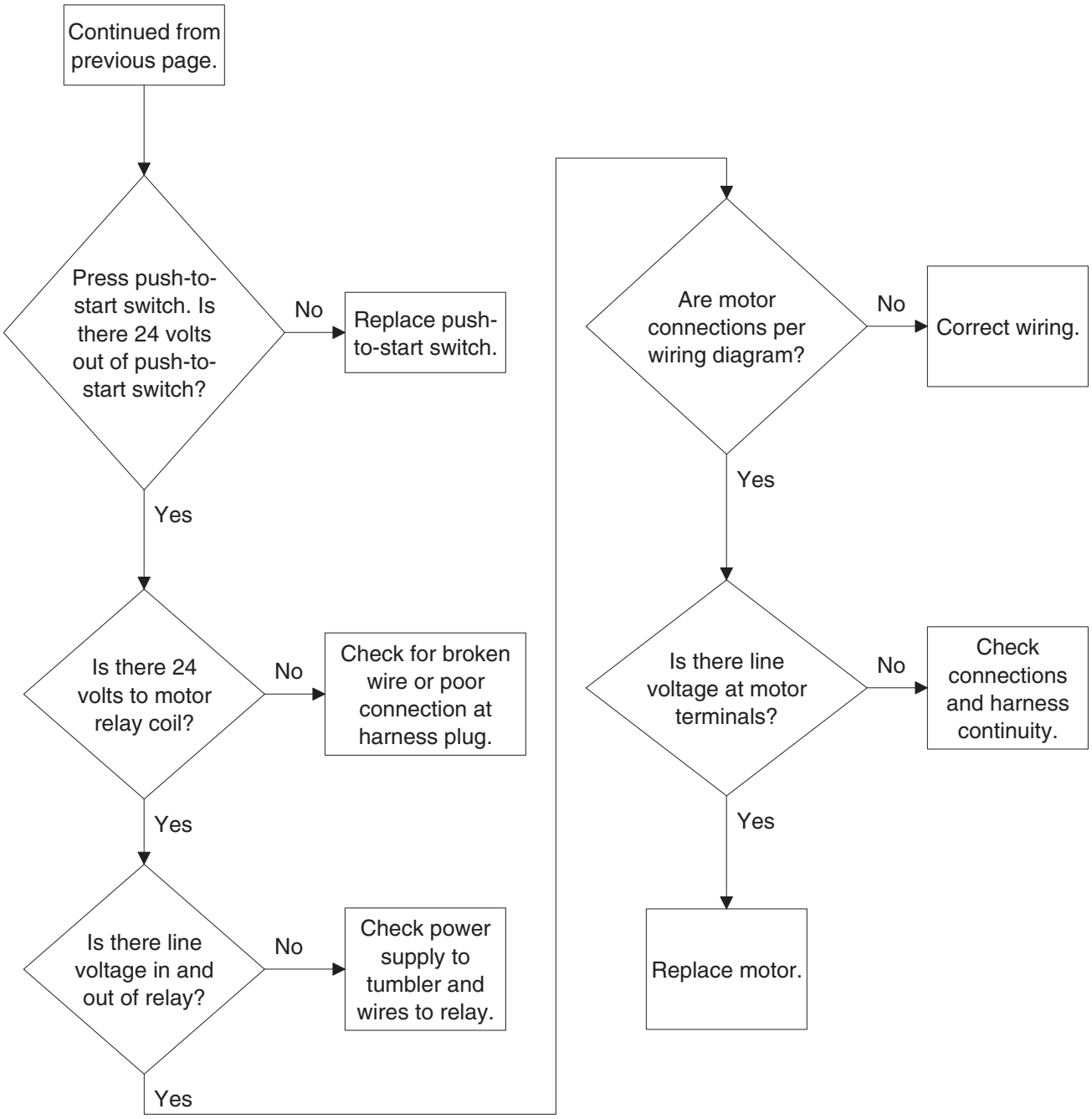
TMB1917S

19. Tumbler Will Not Start, Time on Drying Timer, Door Closed – Manual Timer Models



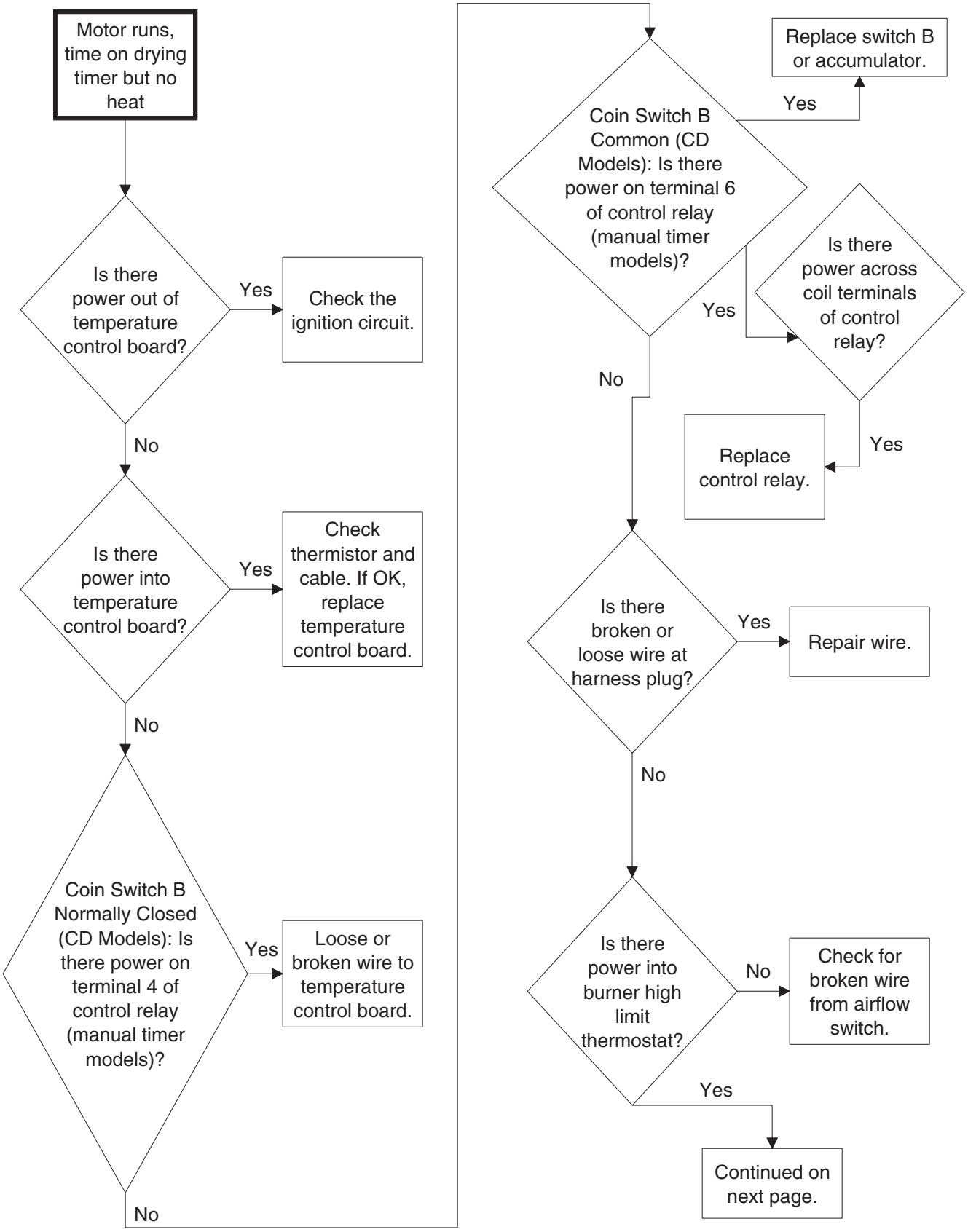
TMB1889S-a

19. Tumbler Will Not Start, Time on Drying Timer, Door Closed – Manual Timer Models (continued)



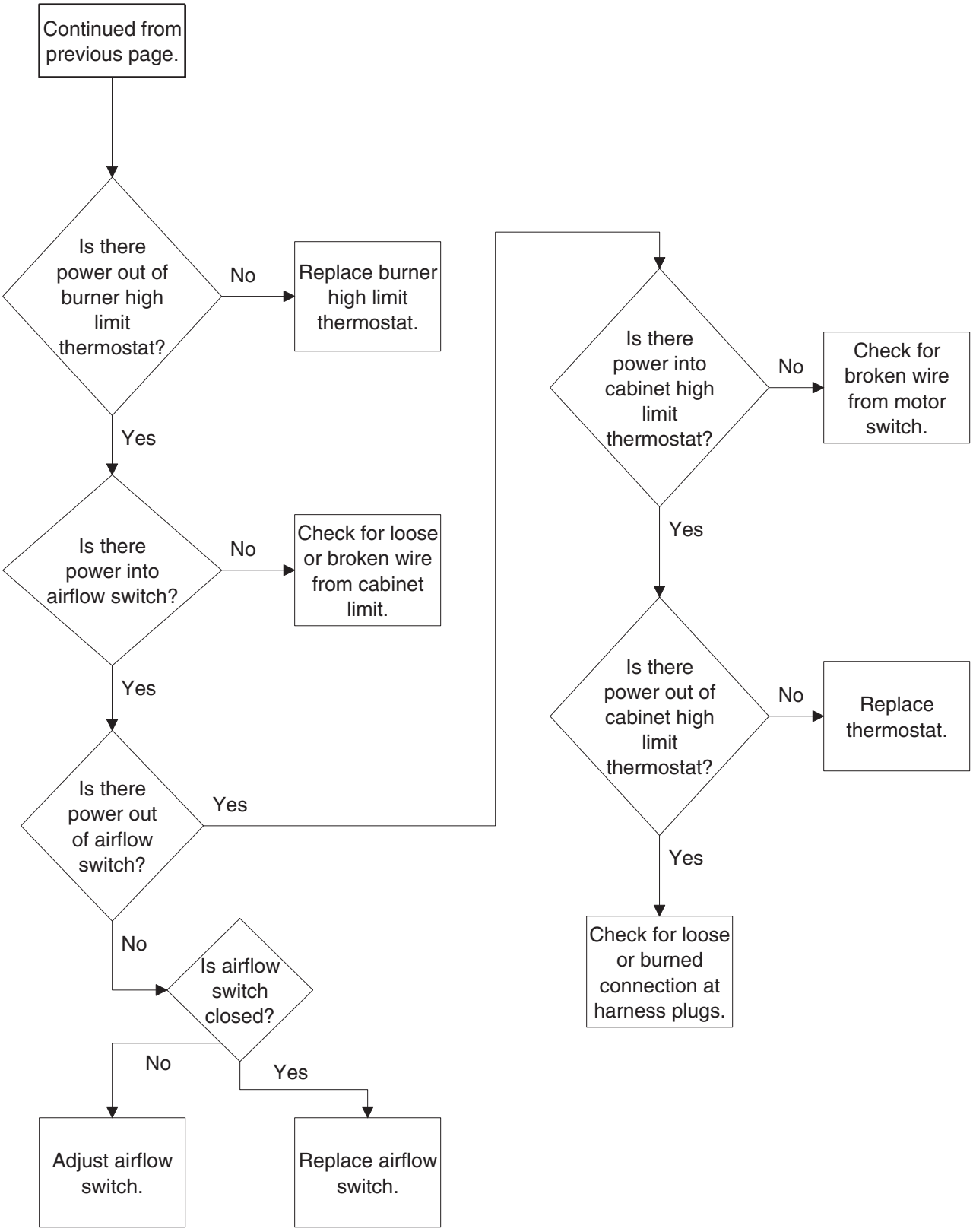
TMB1889S-b

20. Motor Runs, Time on Drying Timer But No Heat



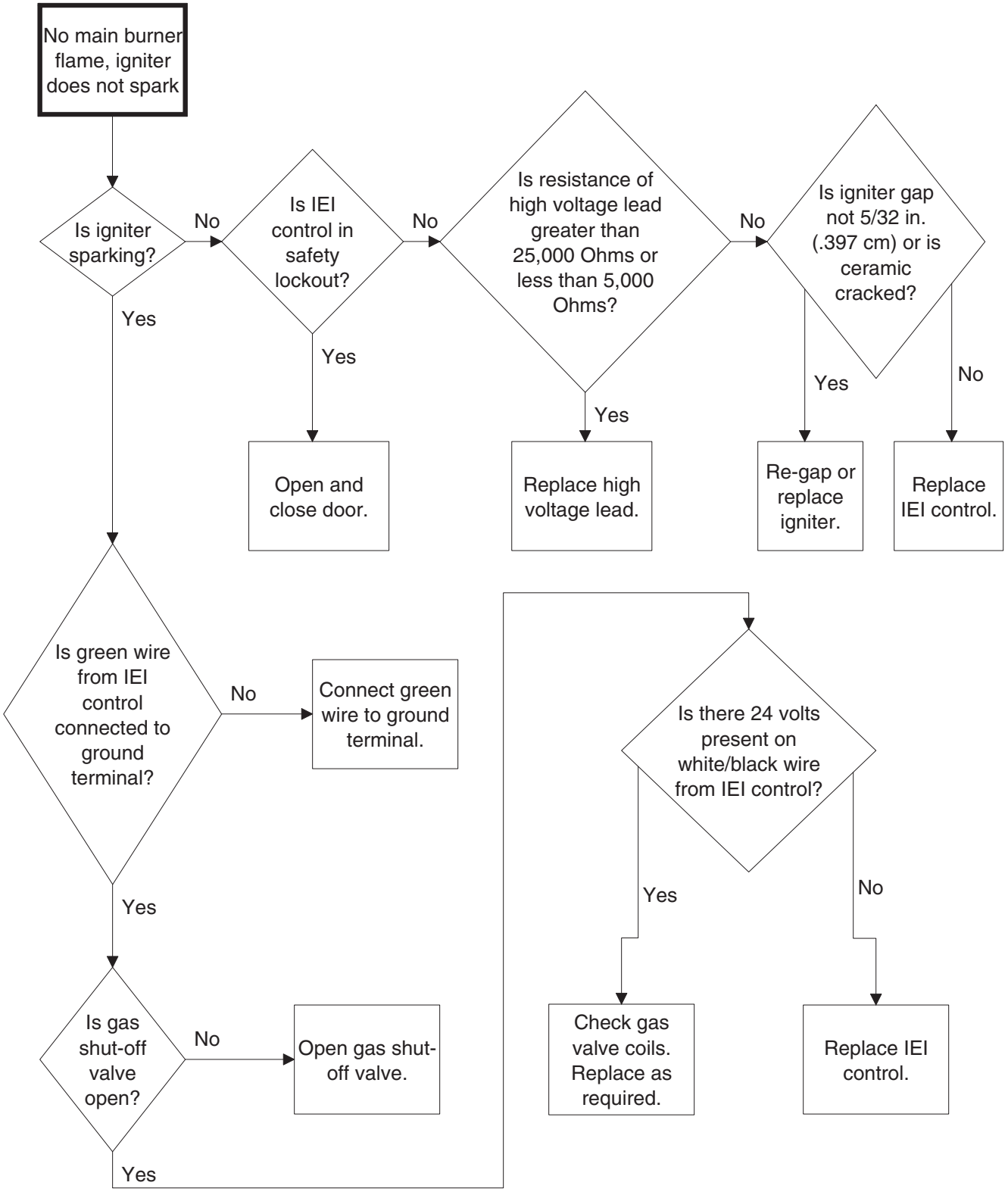
TMB1890S-a

20. Motor Runs, Time on Drying Timer But No Heat (continued)



TMB1890S-b

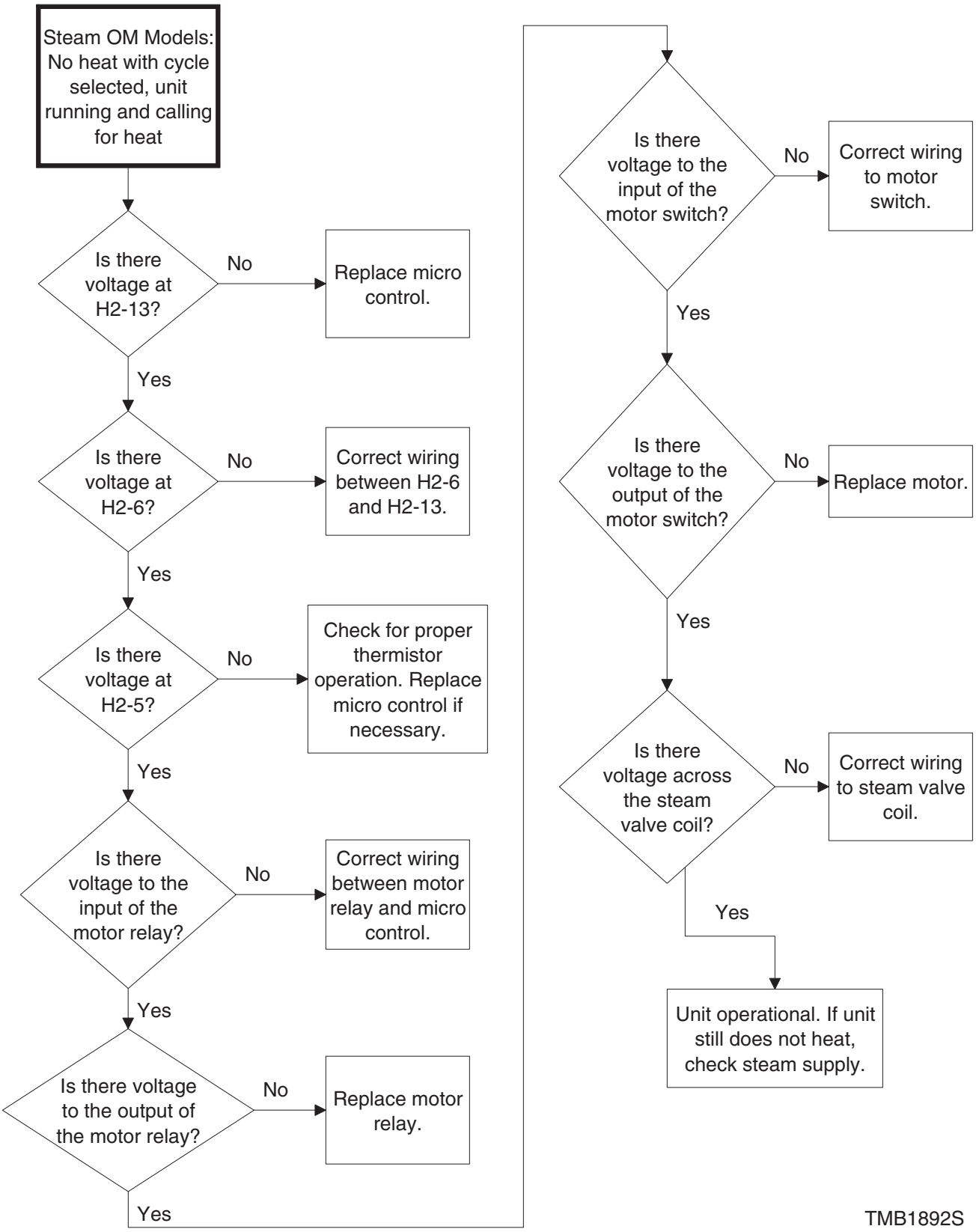
21. No Main Burner Flame, Igniter Does Not Spark



TMB1891S

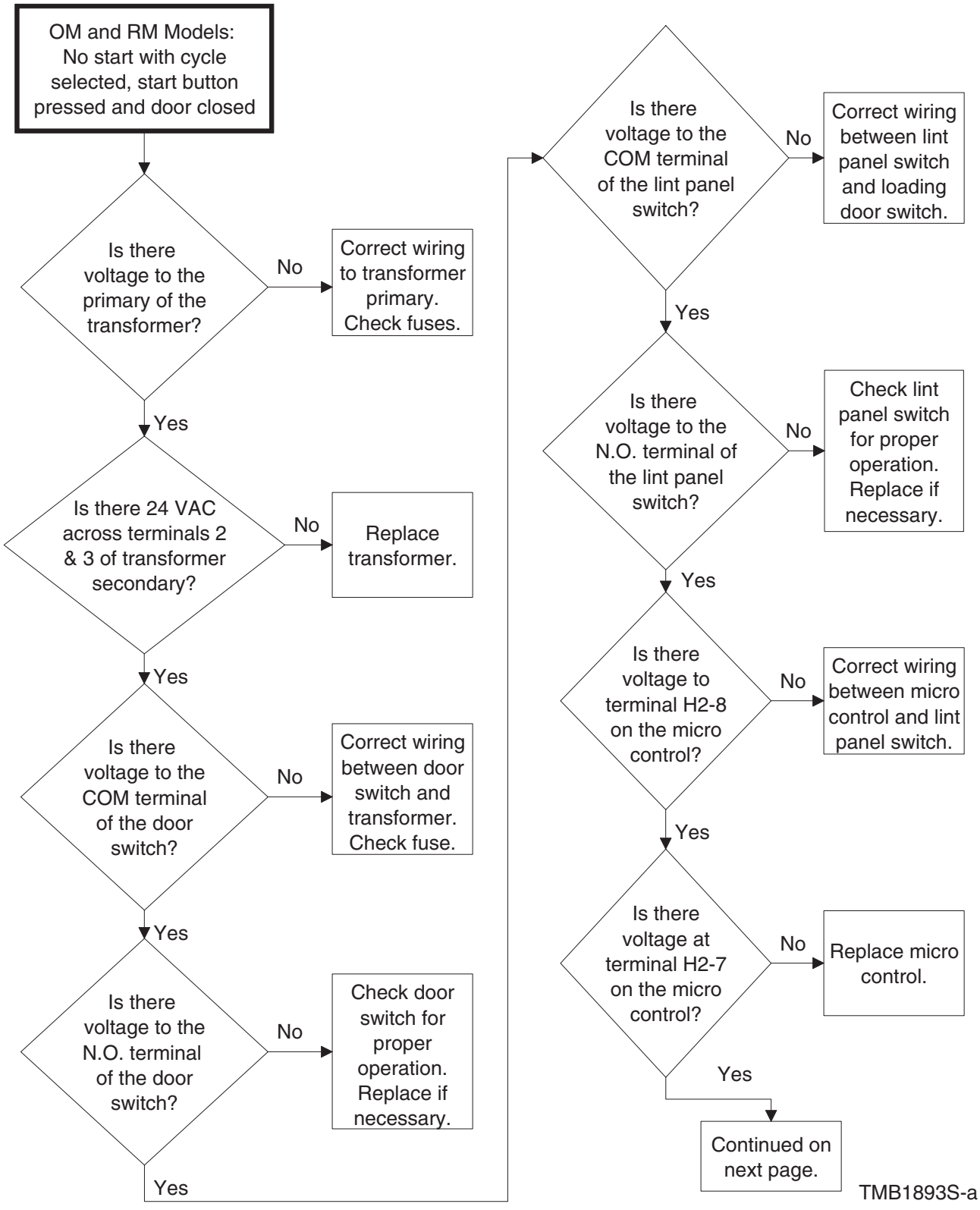
22. Steam OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat

120 Volt/60 Hertz/1 Phase and 208-240 Volt/60 Hertz/1 Phase Nonreversing
460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing



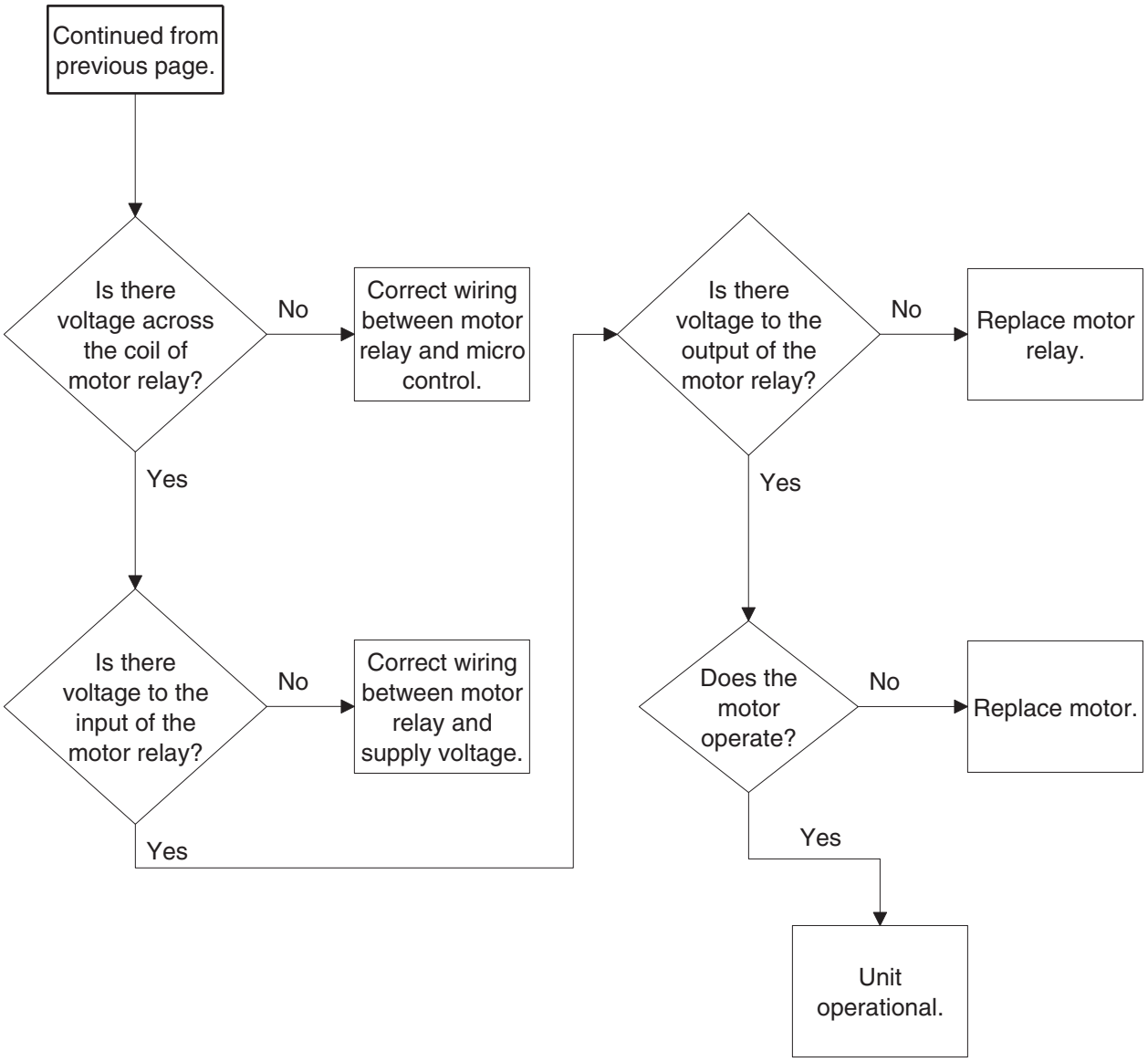
23. OM and RM Control: No Start With Cycle Selected, Start Button Pressed and Door Closed

120 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing
208-240 Volt/60 Hertz/1 or 3 Phase Steam Nonreversing
208-240 Volt/60 Hertz/3 Phase Electric Nonreversing
460-480 Volt/60 Hertz/3 Phase Gas, Electric and Steam Nonreversing



TMB1893S-a

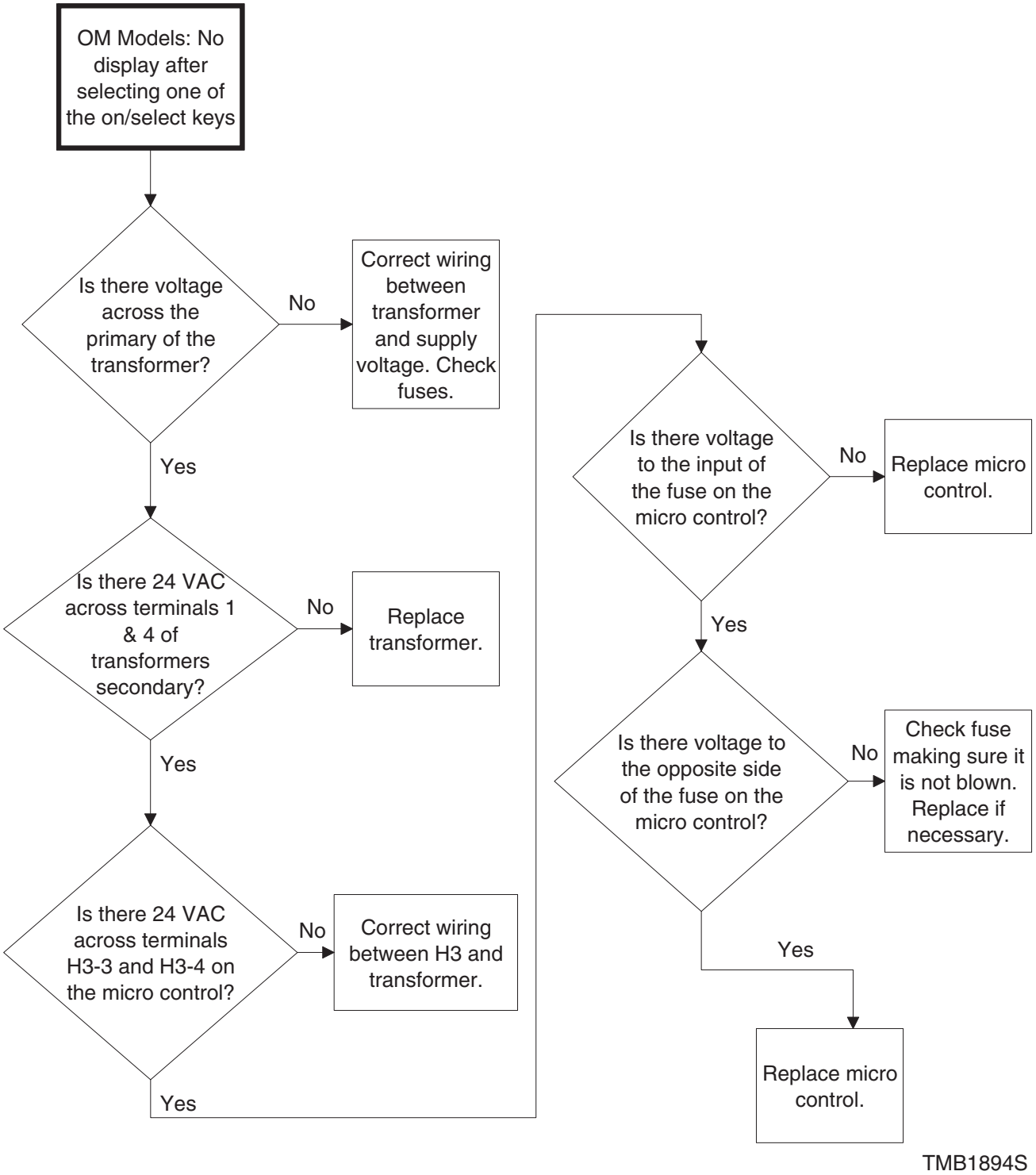
23. OM and RM Control: No Start With Cycle Selected, Start Button Pressed and Door Closed (continued)



TMB1893S-b

24. OM Control: No Display After Selecting One of the ON/SELECT Keys

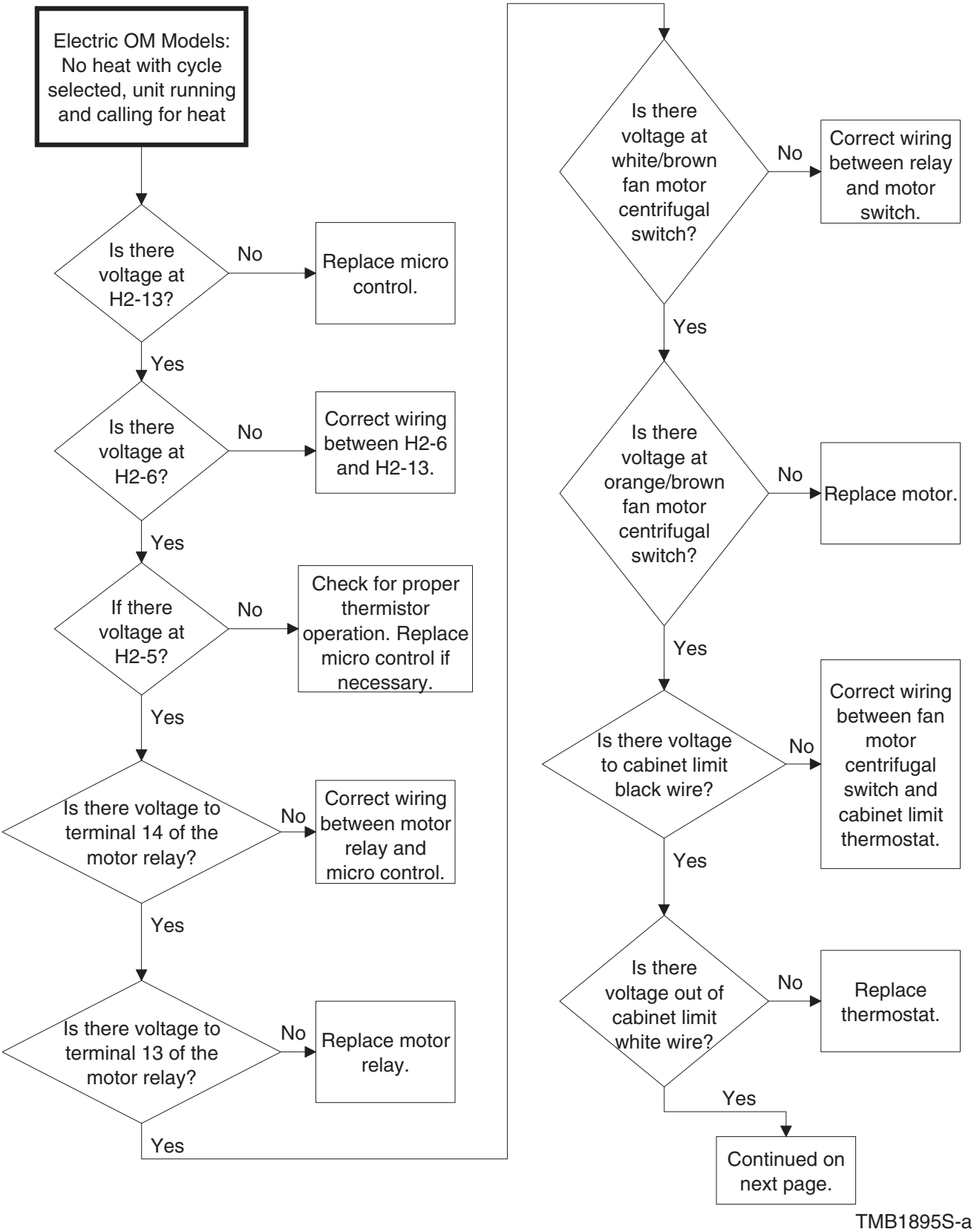
120 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing
208-240 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing
208-240 Volt/60 Hertz/3 Phase Gas and Steam Reversing/Nonreversing
208-240 Volt/60 Hertz/3 Phase Electric Reversing/Nonreversing
460-480 Volt/60 Hertz/3 Phase Gas, Electric and Steam Reversing/Nonreversing



TMB1894S

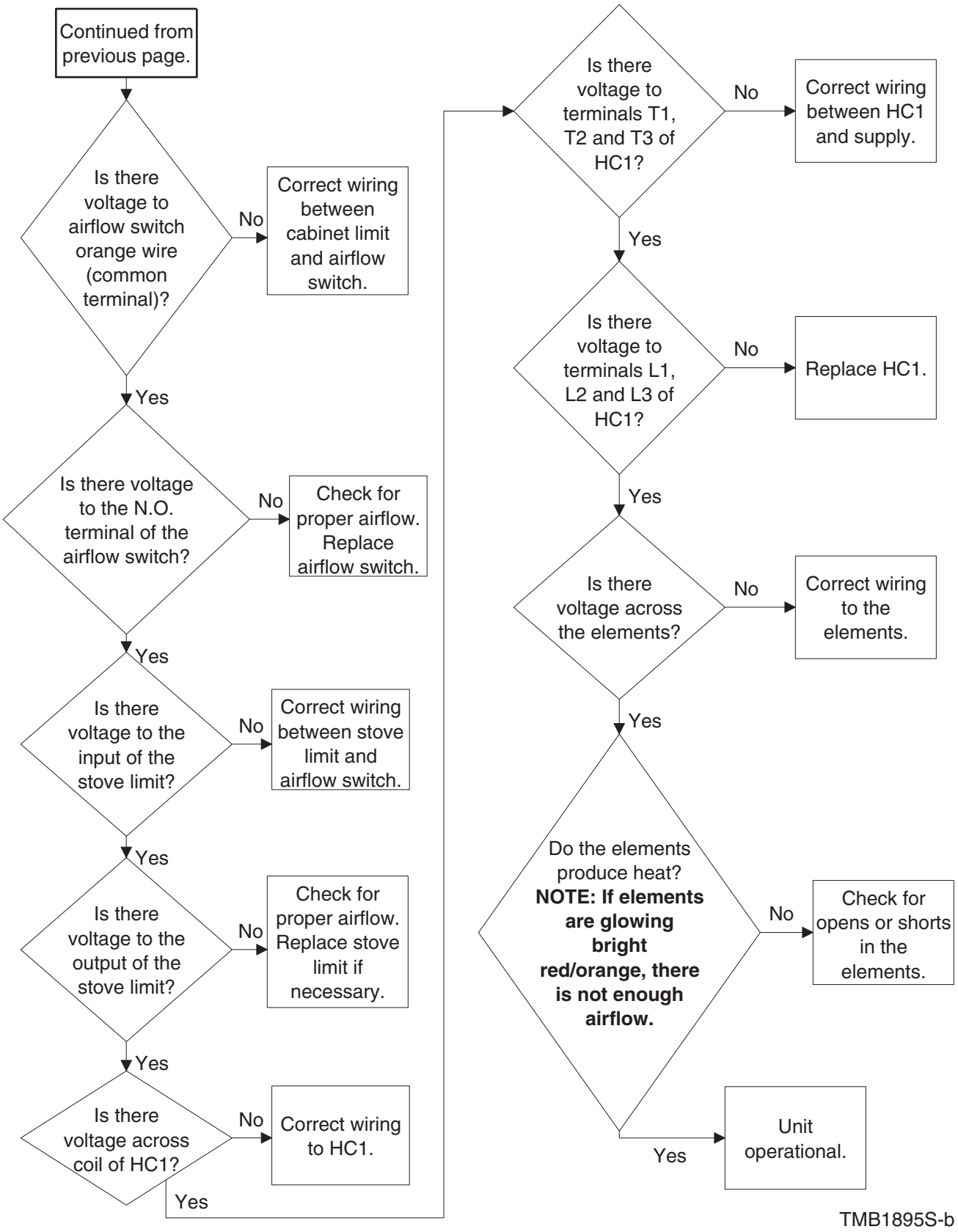
25. Electric OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat

460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing



TMB1895S-a

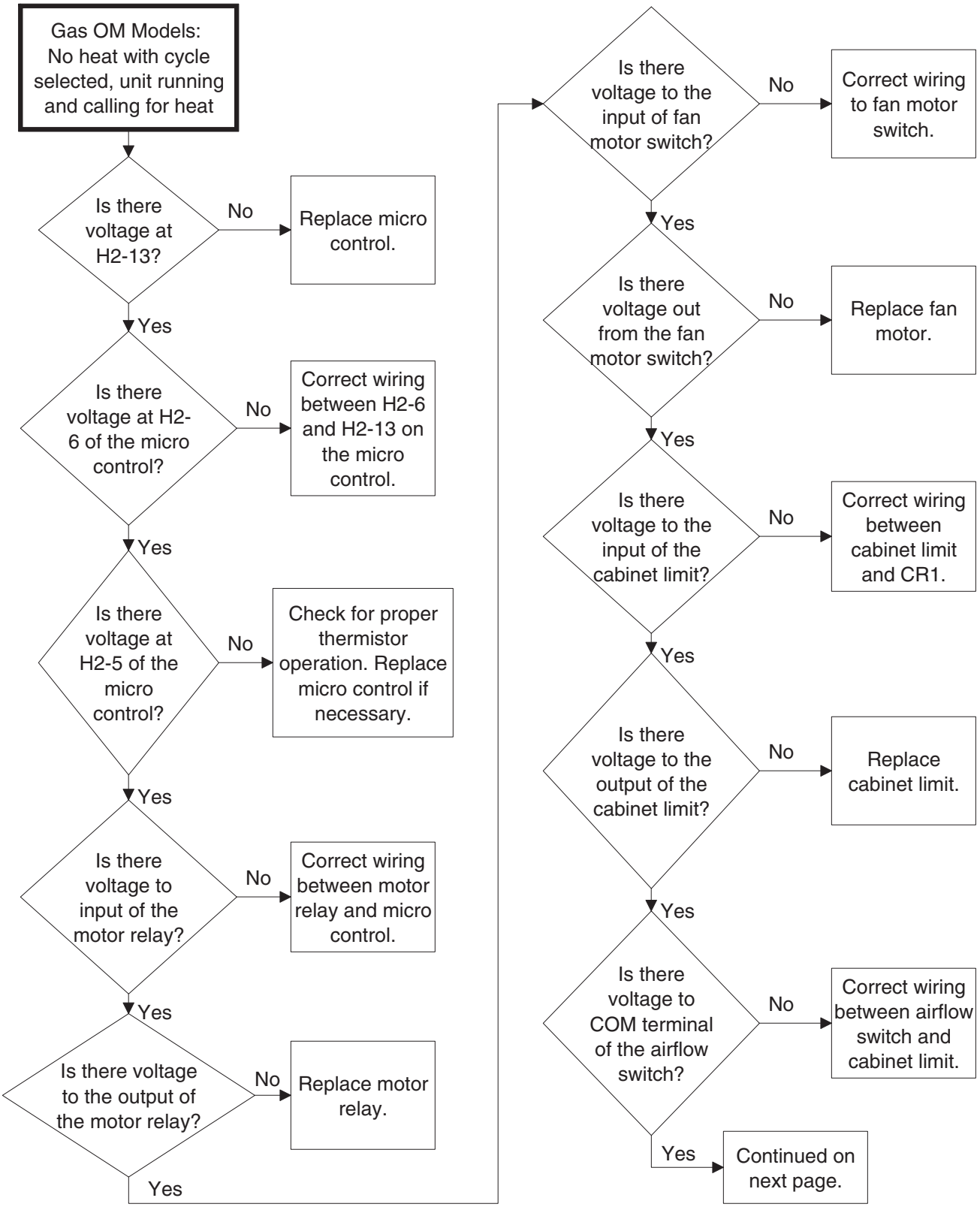
25. Electric OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat (continued)



TMB1895S-b

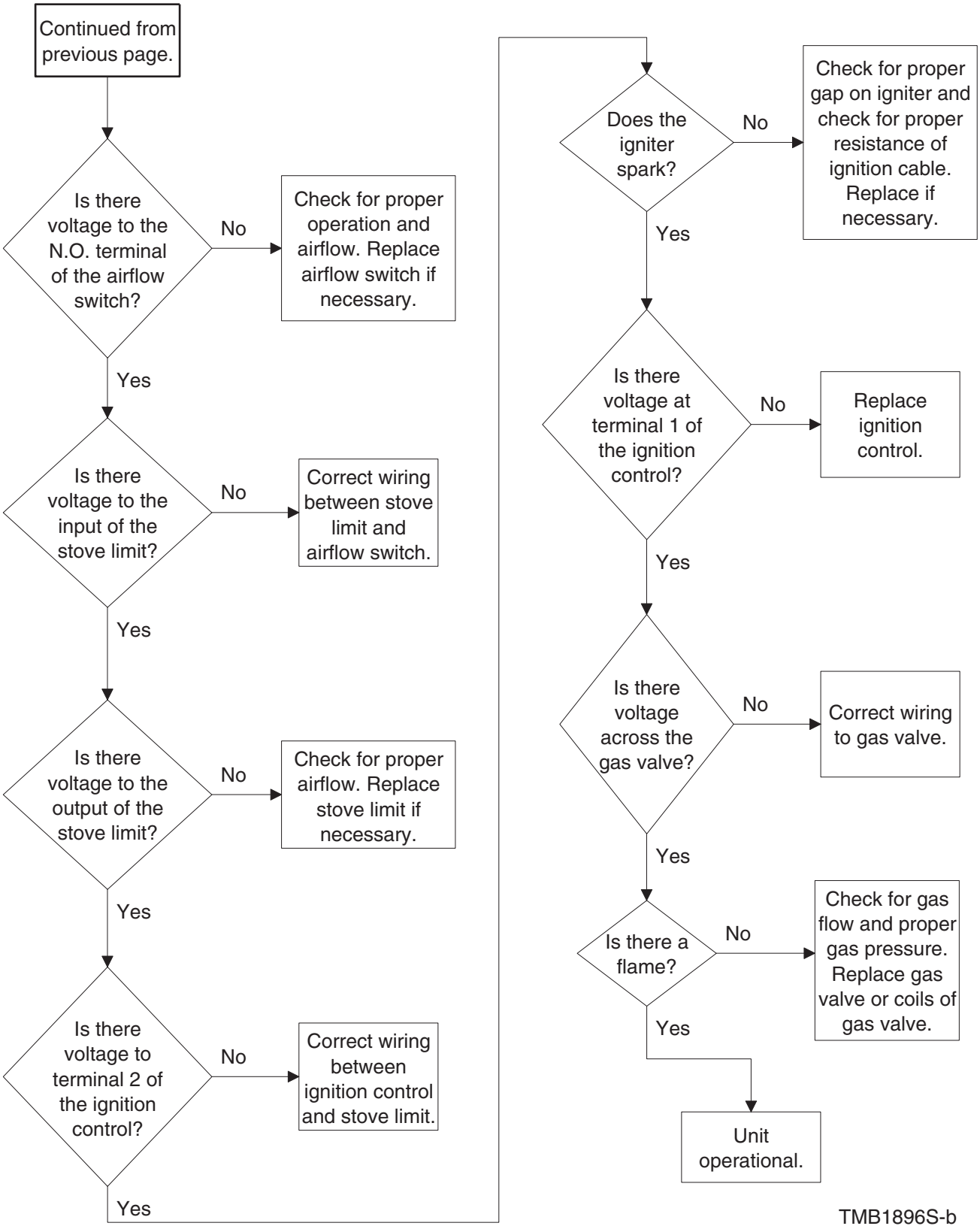
26. Gas OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat

120 Volt/60 Hertz/1 Phase and 208-240 Volt/60 Hertz/1 Phase Nonreversing
460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing



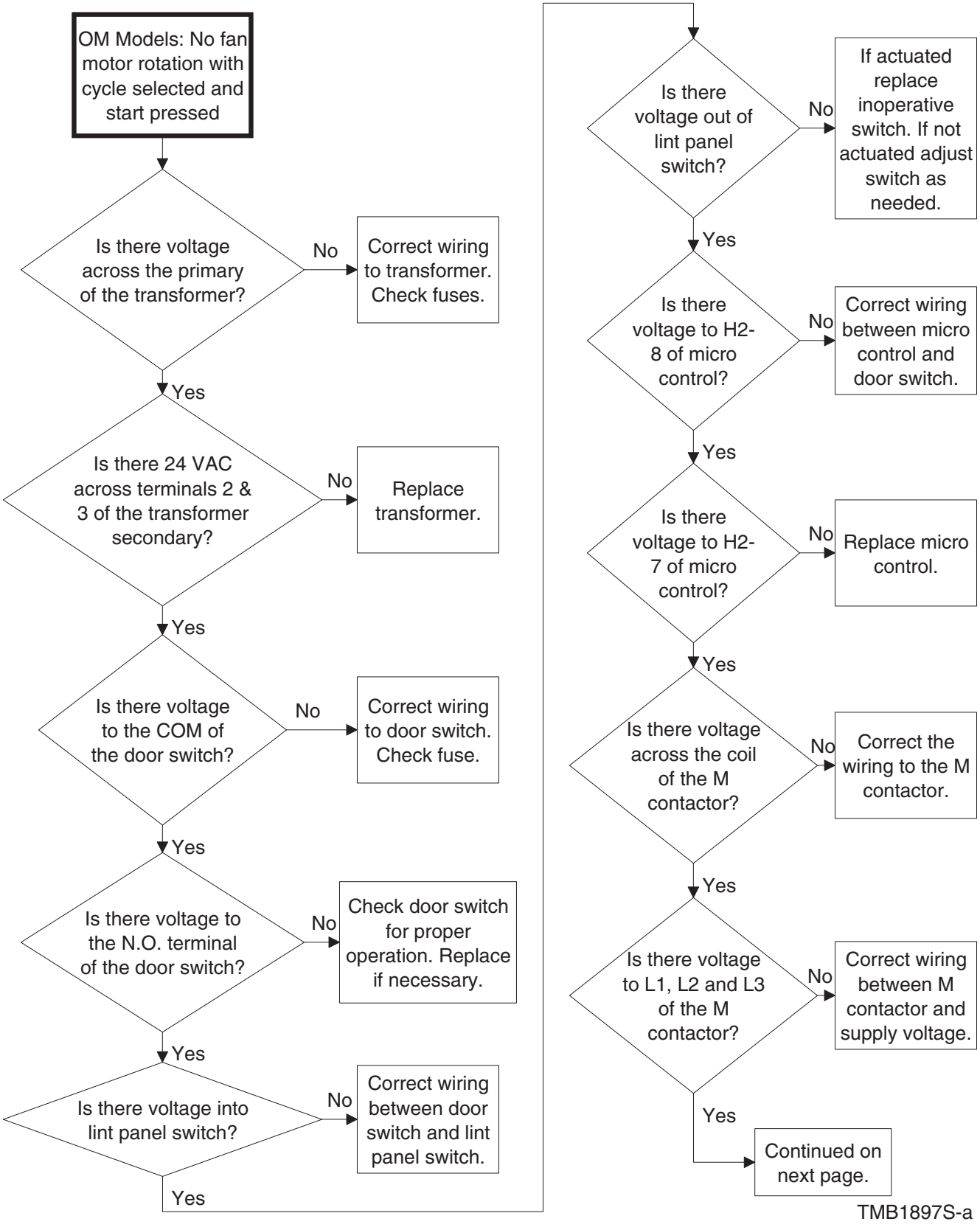
TMB1896S-a

26. Gas OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat (continued)



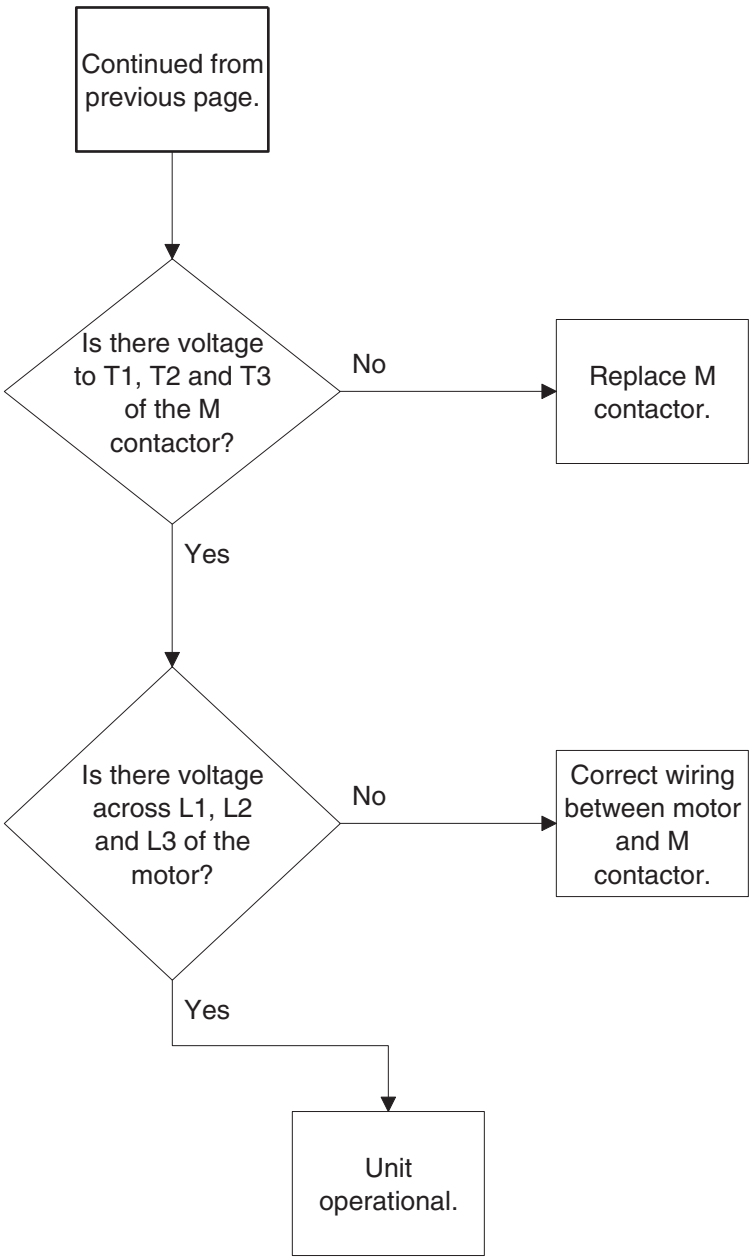
27. OM Control: No Fan Motor Rotation With Cycle Selected and Start Pressed

208-240 Volt/60 Hertz/3 Phase and 480 Volt/60 Hertz/3 Phase Electric Reversing Models
208-240 Volt/60 Hertz/3 Phase and 460-480 Volt/60 Hertz/3 Phase Gas Reversing and Steam Models



TMB1897S-a

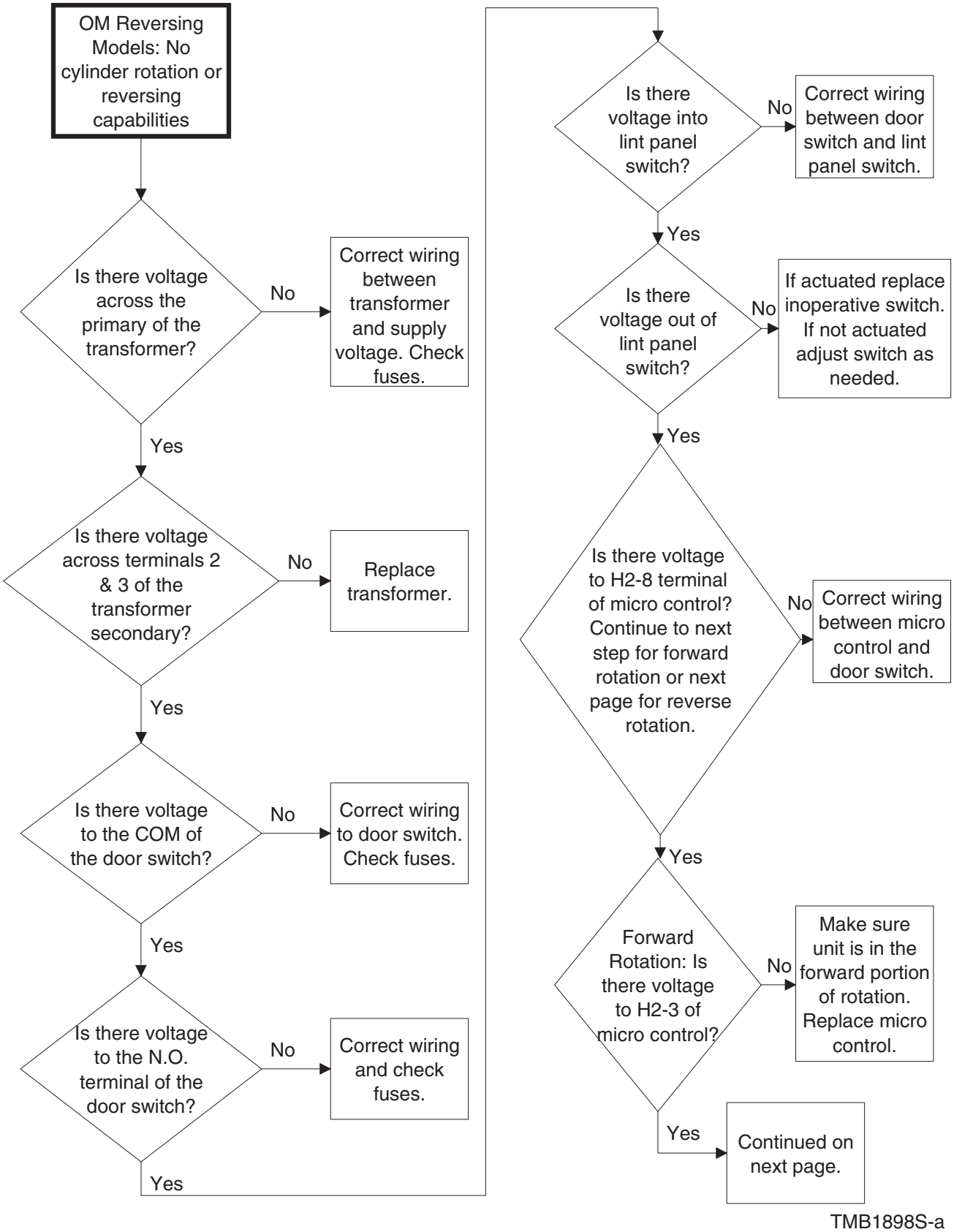
27. OM Control: No Fan Motor Rotation With Cycle Selected and Start Pressed (continued)



TMB1897S-b

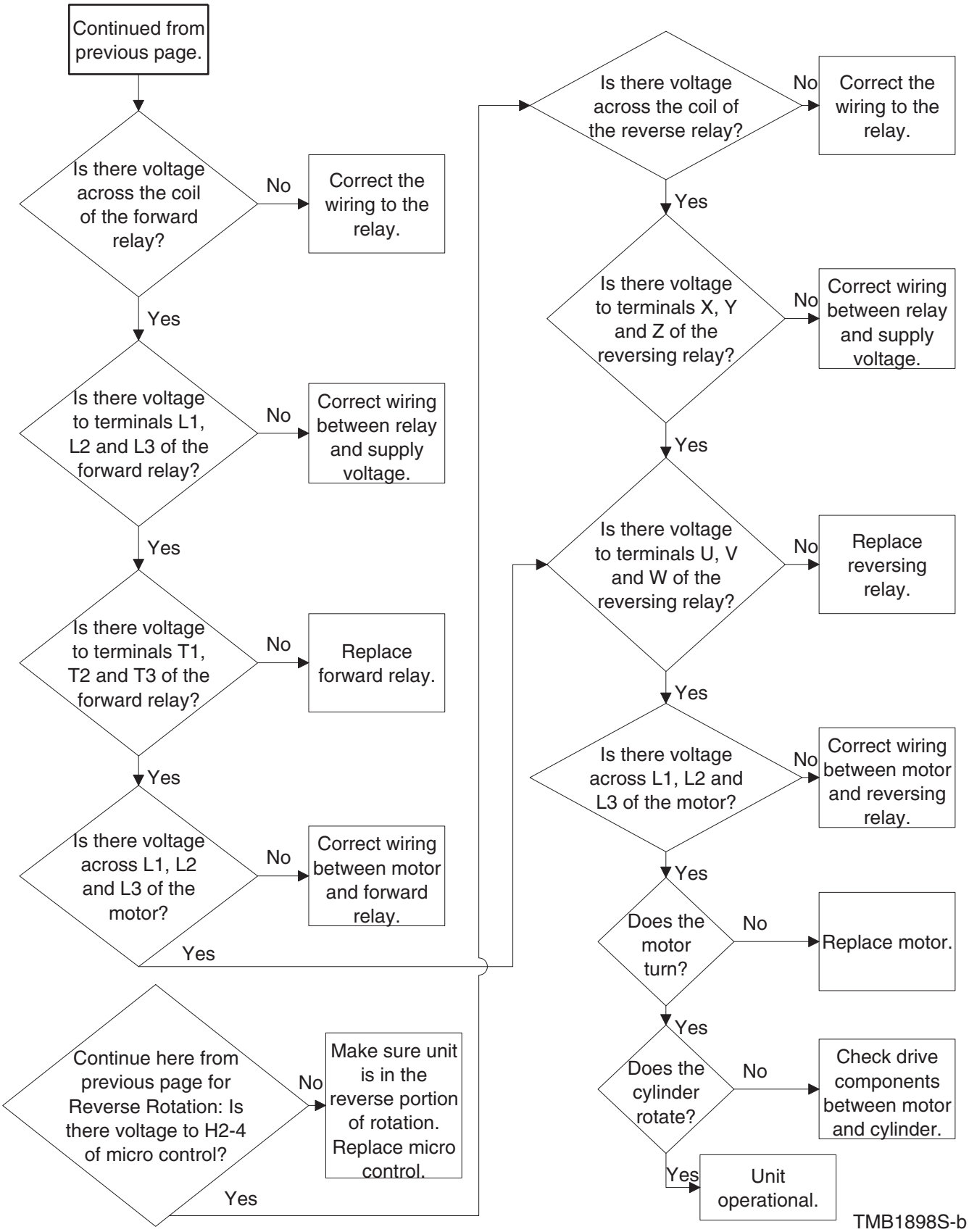
28. OM Reversing Control: No Cylinder Rotation or Reversing Capabilities

208-240 Volt/60 Hertz/3 Phase and 480 Volt/60 Hertz/3 Phase Electric Models
208-240 Volt/60 Hertz/3 Phase and 460-480 Volt/60 Hertz/3 Phase Gas and Steam Models



TMB1898S-a

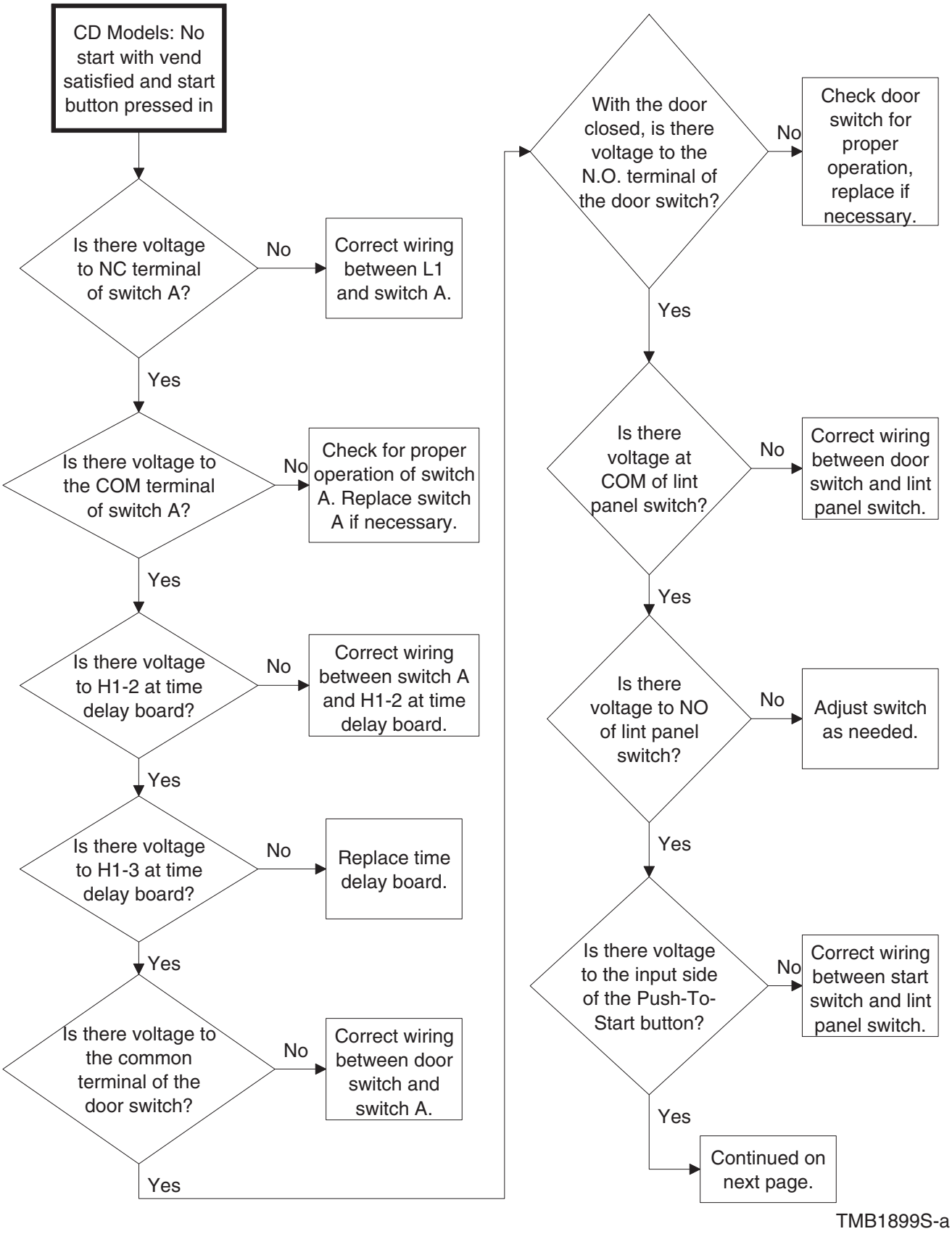
28. OM Reversing Control: No Cylinder Rotation or Reversing Capabilities (continued)



TMB1898S-b

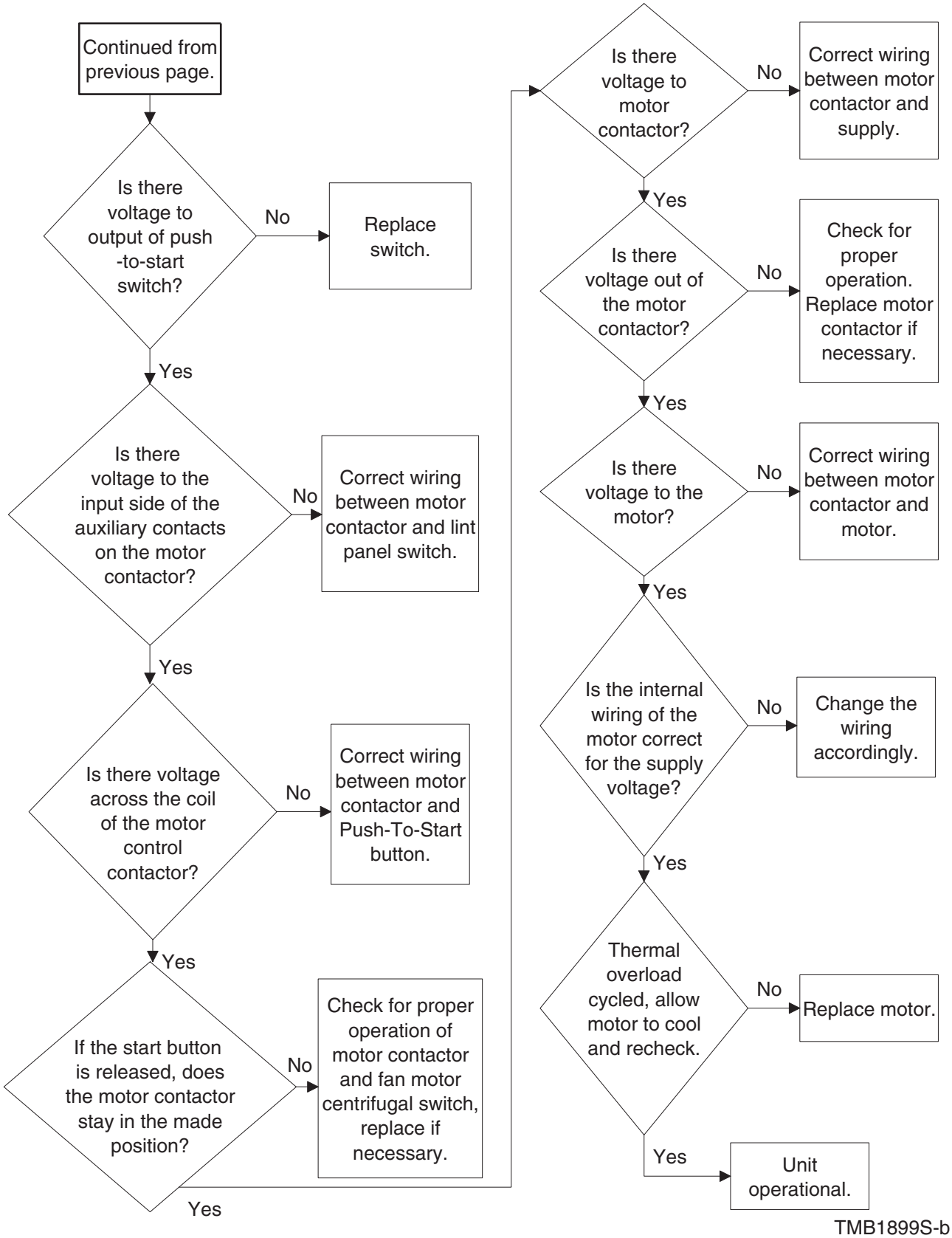
29. CD Control: No Start With Vend Satisfied and Start Button Pressed In

NOTE: All voltage checks are referenced to neutral unless stated otherwise.



TMB1899S-a

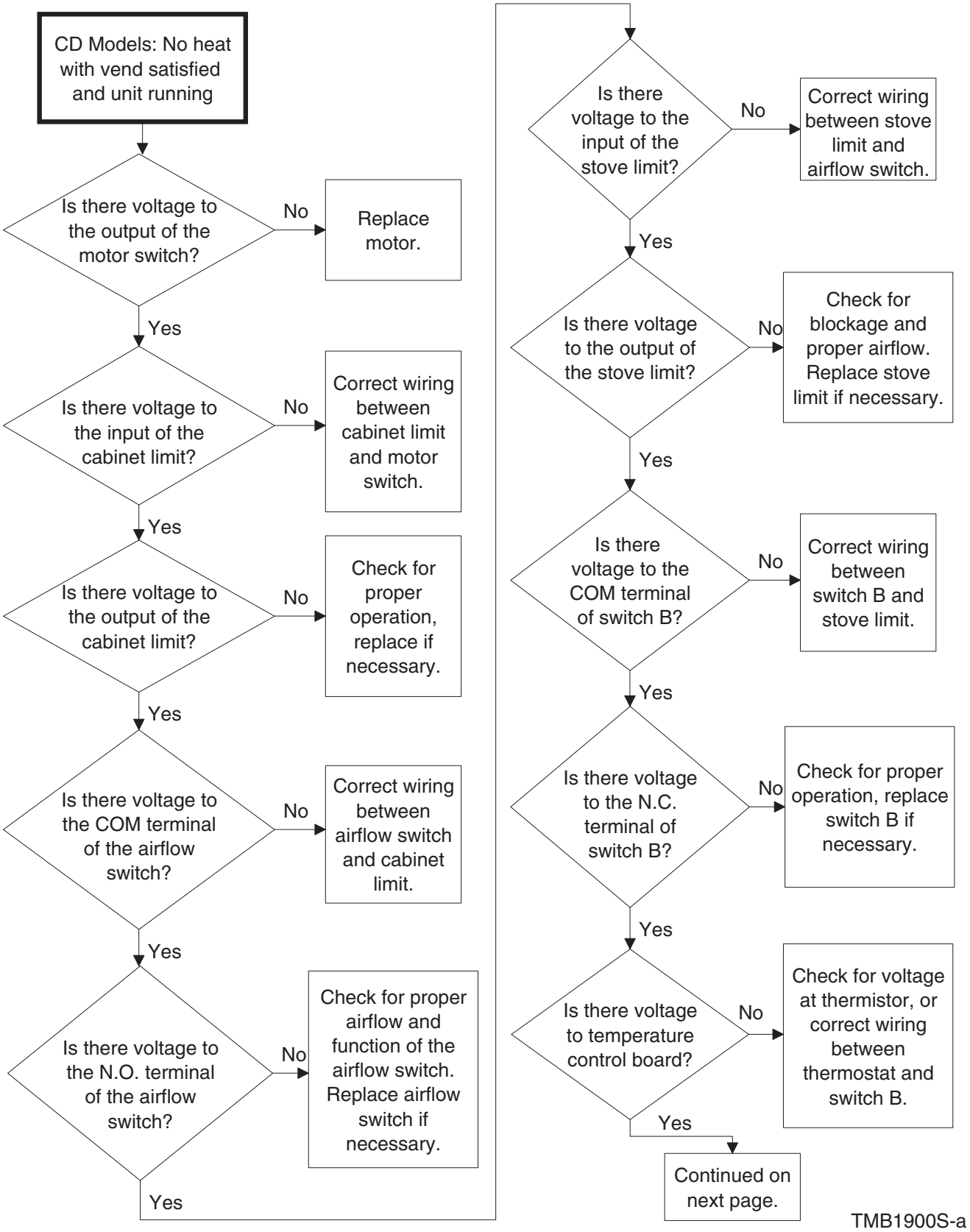
29. CD Control: No Start With Vend Satisfied and Start Button Pressed In (continued)



TMB1899S-b

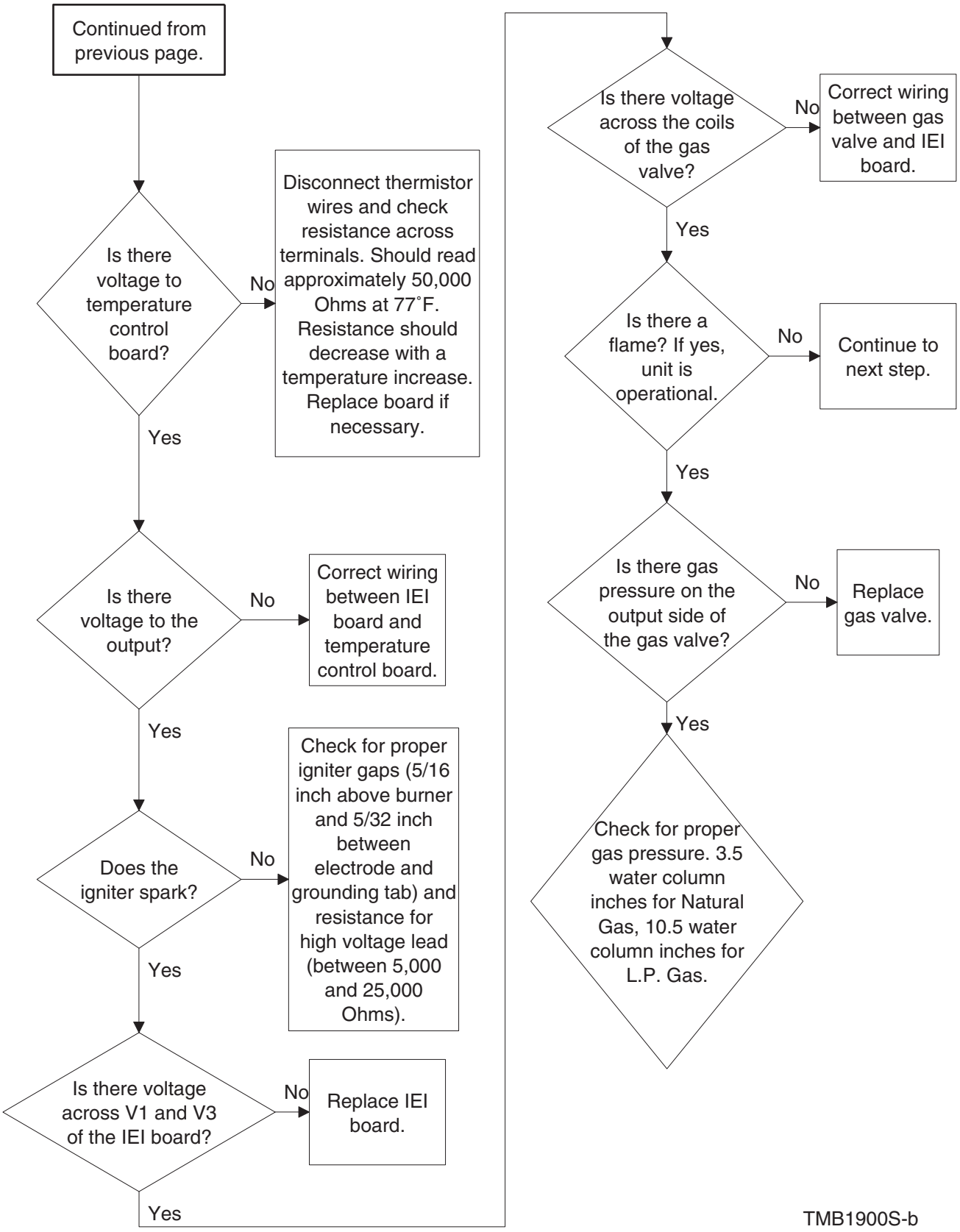
30. CD Control: No Heat With Vend Satisfied and Unit Running

NOTE: All voltage checks are referenced to neutral unless stated otherwise.



TMB1900S-a

30. CD Control: No Heat With Vend Satisfied and Unit Running (continued)

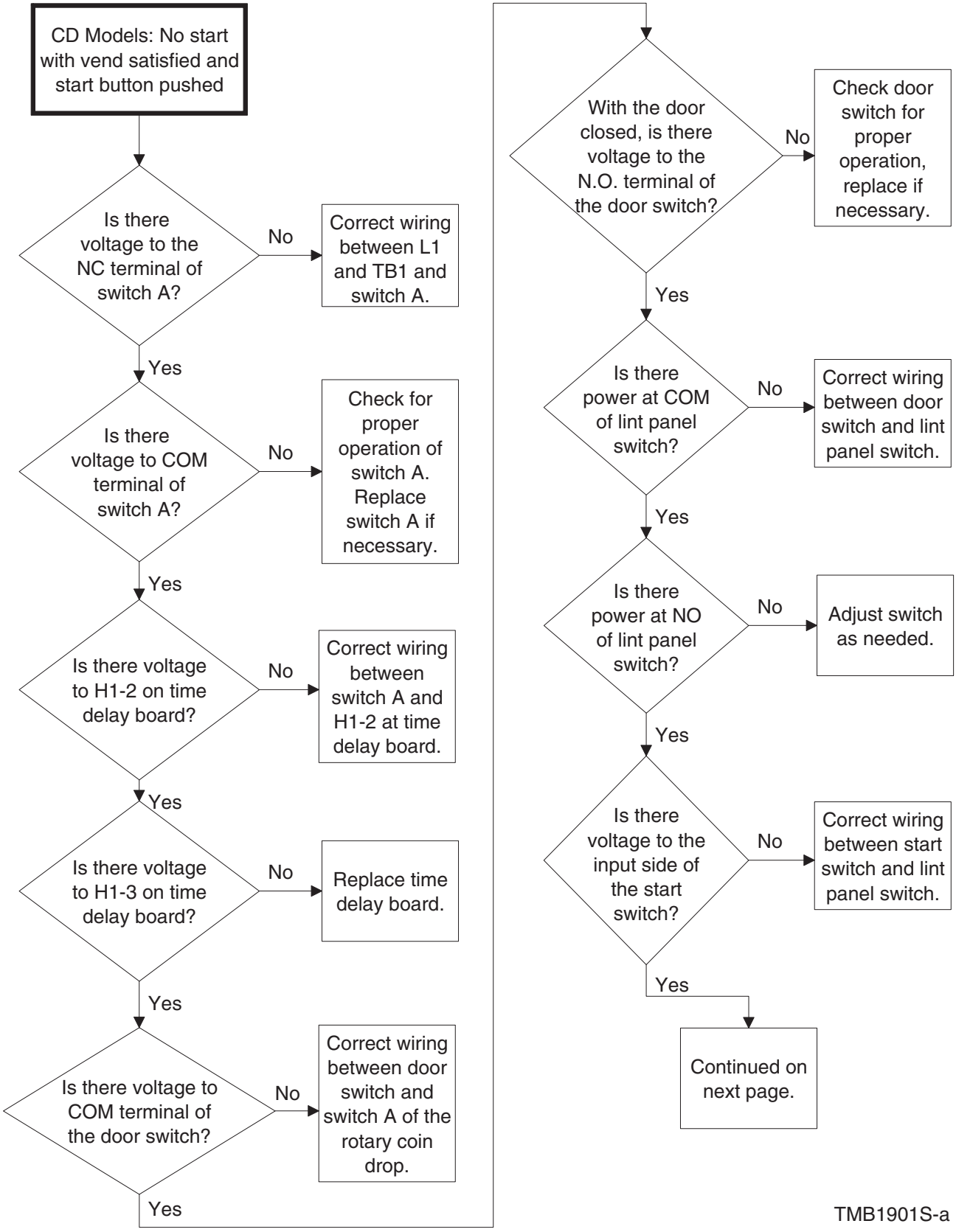


TMB1900S-b

31. CD Control: No Start With Vend Satisfied and Start Button Pushed

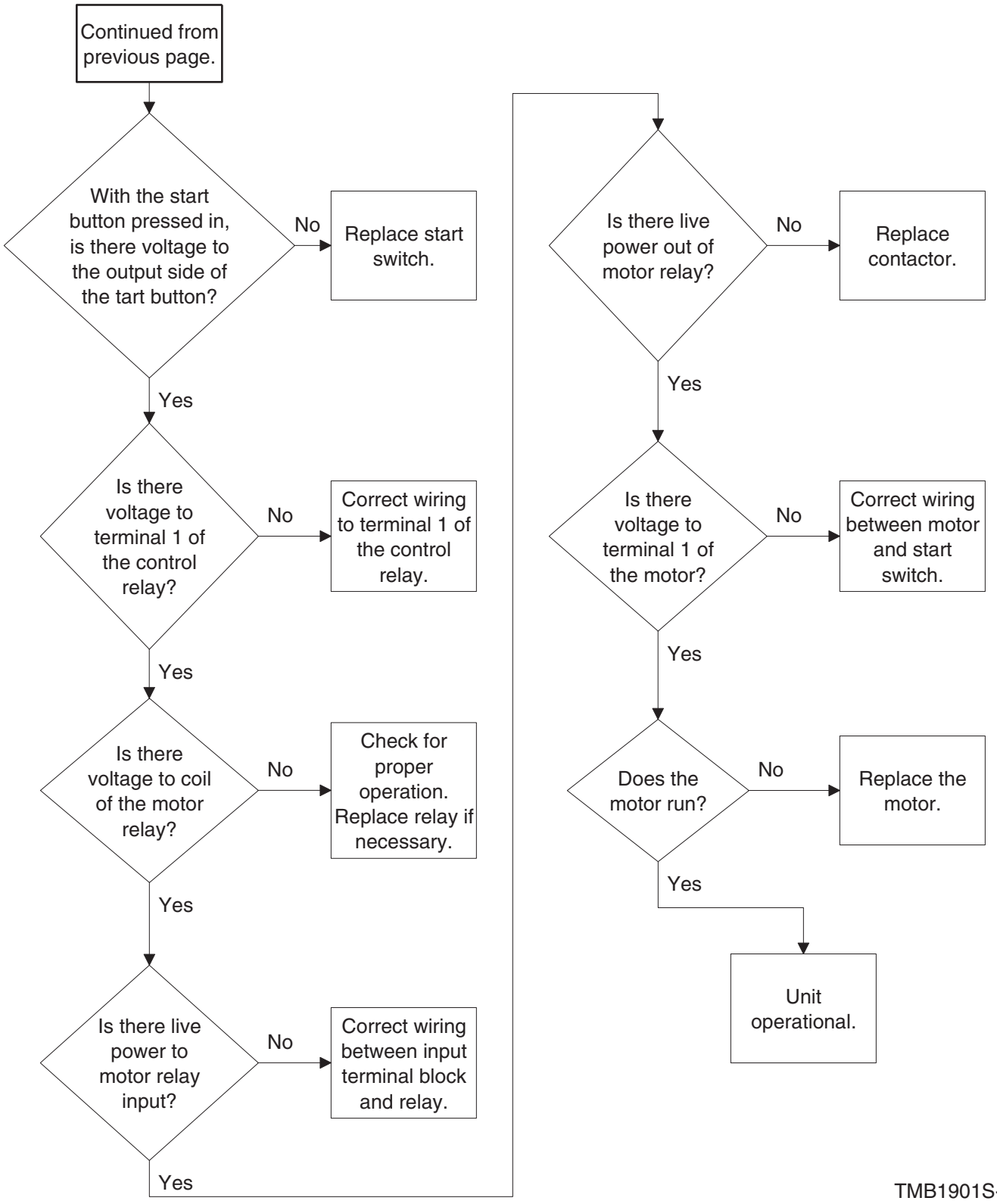
240 Volt/60 Hertz/1 Phase Gas Nonreversing

NOTE: All voltage checks are referenced to neutral unless stated otherwise.



TMB1901S-a

31. CD Control: No Start With Vend Satisfied and Start Button Pushed (continued)



TMB1901S-b

Section 4
Adjustments

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

32. Main Gas Burner Air Inlet Shutters (Gas Models)

Refer to *Figure 1*.

CAUTION

The air inlet shutters on the burner must be adjusted so sufficient primary air is metered into the system for proper combustion and maximum efficiency. Before adjusting the inlet shutter be sure that all lint is removed from lint compartment and lint screen.

W281

Air inlet shutter adjustments will vary from location to location and will depend on the vent system, number of units installed, make-up air and line gas pressure. Opening the shutter increases the amount of air supplied to the burner while closing the shutter decreases the air supply. Adjust air shutter as follows:

a. Unlock and remove the access door.
b. Start the tumbler and check the flame pattern. Correct air and gas mixture is indicated if the flame pattern is primarily blue, with small yellow tips, and bends to the right of the heater section. Too little air is indicated if the flame is yellow, lazy and smoky.
c. To adjust the air inlet shutter, loosen adjusting screws.
d. Push or pull shutters in or out as necessary to obtain desired flame intensity.
e. After shutter is adjusted, tighten locking screw securely.
f. If the shutter is correctly adjusted, but the flame pattern is straight up, insufficient air is flowing through the tumbler and **airflow switch is improperly set**. A flame pattern that flares to the right and left indicates that no air is flowing through the tumbler. Adjust airflow switch.

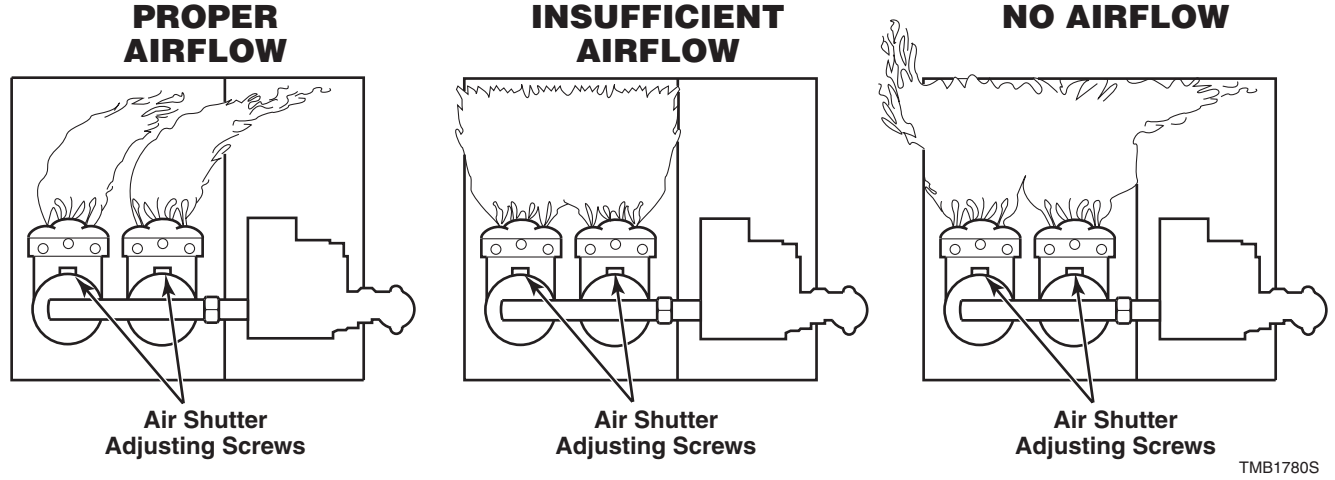


Figure 1

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

33. Airflow Switch (Gas and Electric Models)

Refer to *Figure 2*.

WARNING

To reduce the risk of fire, airflow switch operation may be affected by a clogged lint screen, lack of make-up air, obstructions at the thimble or in the customer installed main or collector ducts. These conditions must be checked and necessary corrections made before adjusting airflow switch. Always adjust airflow at installation.

W474

The airflow switch (located on the rear of tumbler, *Figure 2*), is set at the factory for proper operation. However, if there is a problem with the switch, it should be adjusted as follows:

NOTE: Steam models do not have an airflow switch.

NOTE: Control panel must be in place and access door closed before attempting to adjust airflow switch.

IMPORTANT: Airflow switch disc must remain closed during operation. If it opens and closes during the drying cycle, this indicates insufficient airflow through the tumbler. If switch remains open, or pops open and closed during the cycle, the heating system will shut off. The cylinder and fan will continue to operate even though the airflow switch is opened.

The airflow switch operation is controlled by the counterweight position on the shaft. Moving the counterweight either increases or decreases airflow switch sensitivity. The counterweight should be adjusted so the disc moves away from the cabinet when the lint panel is opened 1-1/2 inch (38.1 mm) with a full load. Adjust the airflow switch as follows:

a. Load the tumbler. This adjustment is much faster to make with one person opening lint panel in front and another adjusting the counterweight in the rear of tumbler.
b. Temporarily tape down the lint panel safety switch located behind the upper right corner of the lint panel.
c. Start the tumbler. Open the lint panel 1-1/2 inch (38.1 mm). The airflow disc should move away from the cabinet, opening the switch contacts and shutting off the heat system. This indicates proper operation and proper adjustment.
d. If switch is not opening as described in step 3, it should be adjusted so it is MORE sensitive. Depress the spring clip and move counterweight toward disc. Retest by opening lint panel and continue moving counterweight toward disc until switch operates as described in *Step c*.
e. If switch opens BEFORE lint panel is opened the proper distance, step 3, it should be adjusted so it is LESS sensitive. Depress the spring clip and move counterweight away from the disc. Retest by opening lint panel and continue moving counterweight away from disc until switch operates as described in *Step c*.

IMPORTANT: Remove tape from lint panel switch.

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

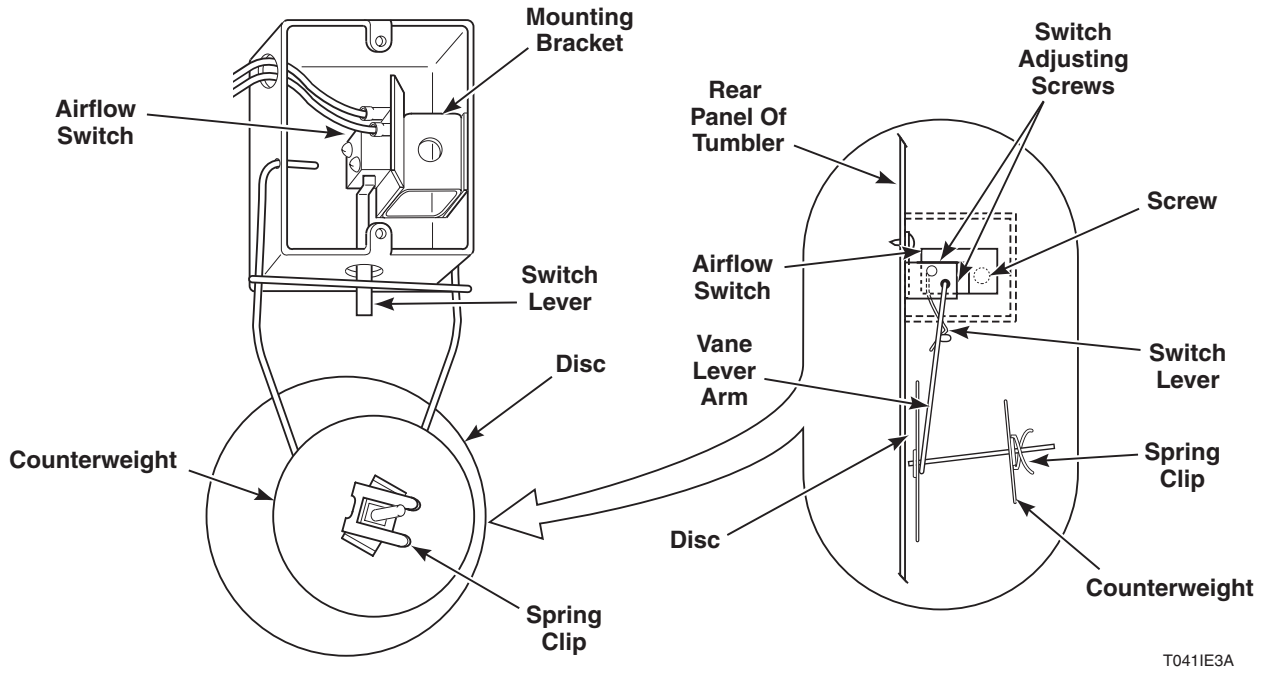


Figure 2

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

34. Loading Door Strike

Refer to *Figure 3*.

The door strike must be adjusted so it has sufficient tension to hold loading door closed against the force of a tumbling load. The door strike is properly adjusted when 8-15 lbs. (17.6-33 kg) of pull is required to open door.

To adjust, open door, loosen acorn nut and turn door strike screw in or out as required. Retighten acorn nut.

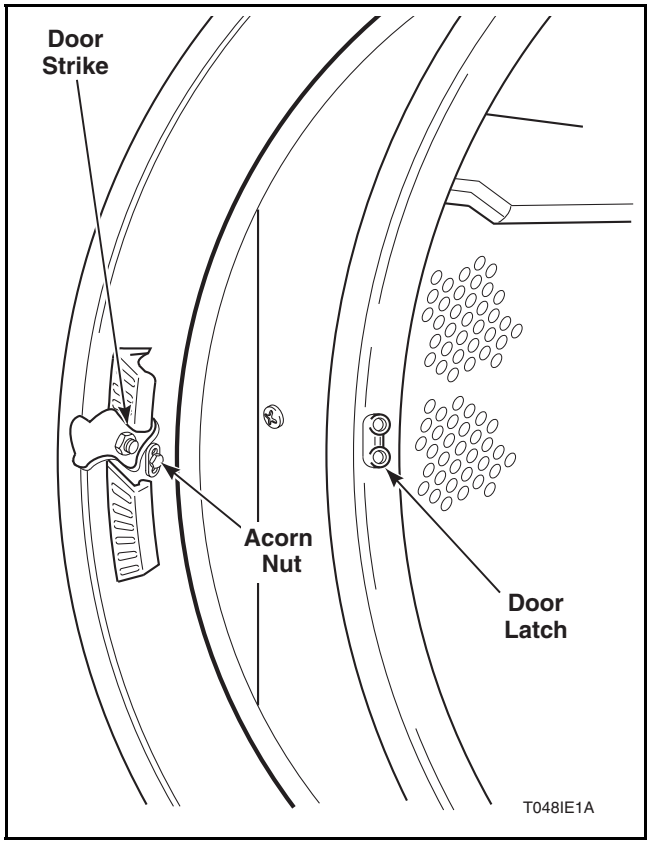


Figure 3

35. Drive Belt Tension

Proper tension is when drive belt can be depressed 1/2 inch (12.7 mm) by applying light thumb pressure (approximately 5 pounds) at a point midway between sheave and motor pulley.

Reversing Belt Drive Models: Proper tension is when each cylinder belt can be depressed approximately 3/16 inch (4.77 mm) by applying light thumb pressure (approximately 5 pounds) at a point midway between the sheave and the idler.

Nonreversing Models:
Refer to *Figure 4*.

a. Remove guard from rear of tumbler.
b. Loosen idler housing capscrews holding idler housing to the housing support.
c. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing capscrews.
d. Replace guard on rear of tumbler.

Reversing Models:
Refer to *Figure 5*.

a. Remove guard from rear of tumbler.
b. To adjust cylinder belt tension, loosen idler housing bolts holding idler housing assembly to the housing support.
c. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing bolts.

NOTE: Adjust cylinder belt tension first, then adjust motor to idler belt tension. Refer to *Figure 5*.

d. Loosen the locking bolt.
e. Loosen the adjusting nut and use the adjusting screw to move the motor up or down.
f. Once proper belt tension is reached, retighten the adjusting nut and locking bolt.
g. Replace the guard on rear of tumbler.

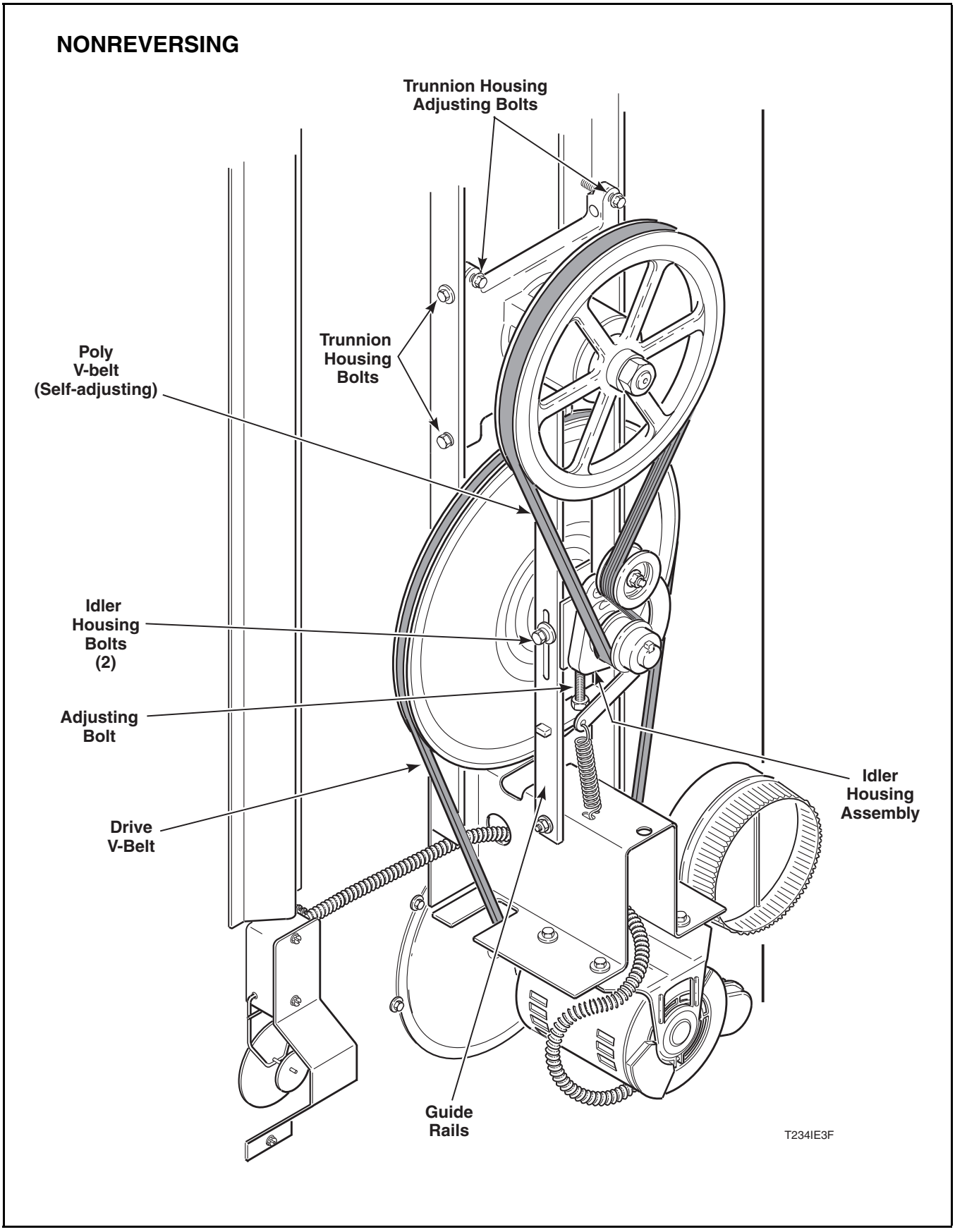


Figure 4

REVERSING

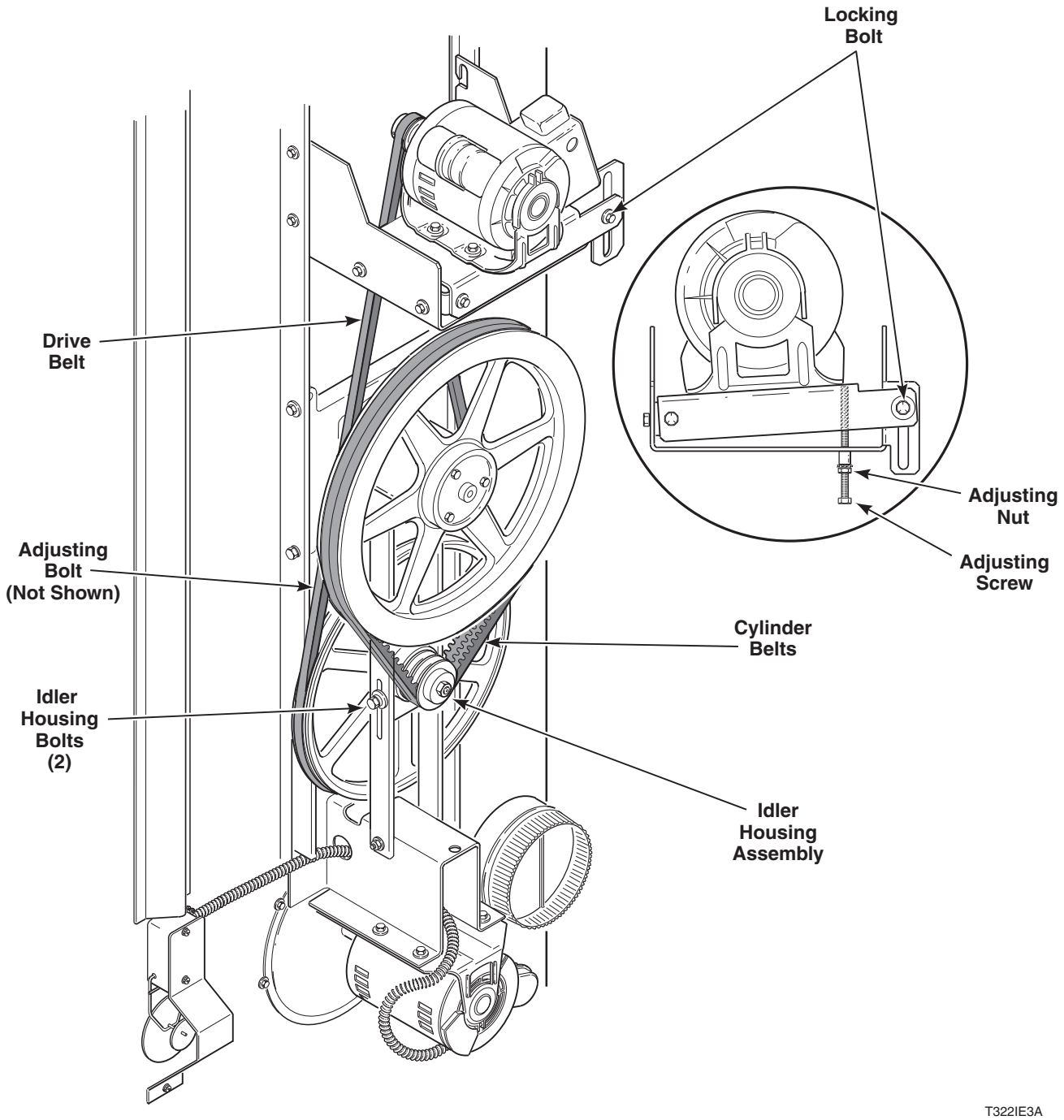


Figure 5

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

36. Cylinder Clearance

The clearance between the cylinder rim and front panel must be adjusted so the cylinder is centered within the front panel opening when the cylinder is fully loaded and is turning. However, the adjustment should be made when the cylinder is empty.

a. Open loading door and check the gap between the center of the front panel top flange and the cylinder rim. Proper adjustment is when the gap is 1/2 - 3/4 inch (12.7 - 19.05 mm). Refer to *Figure 6*.
b. Remove drive guard.
c. Loosen the four trunnion housing bolts. Refer to *Figure 4*.
d. Loosen the locknuts on the trunnion housing adjusting bolts. Refer to *Figure 4*.
e. Turn the adjusting bolts in or out as necessary to obtain proper clearance between cylinder rim and front panel.

NOTE: Turning the adjusting bolts clockwise will raise the cylinder and turning them counter-clockwise will lower the cylinder. Turn both bolts evenly to adjust top and bottom clearance. Turn one or the other adjusting bolt in or out to adjust side clearance.

f. After the cylinder is properly adjusted, tighten the adjusting bolt locknuts and the four trunnion housing bolts.
g. Install the belt guard removed in *Step b.*

NOTE: If adjusting the trunnion housing fails to correct the clearance, the problem is probably due to a worn trunnion shaft or bearings.

NOTE: Use Kit M4763P3 to upgrade from two washers to one spacer on machines made prior to serial number 0902XXXXX to ensure proper cylinder and front panel alignment to prevent the possiblity of forward cylinder movement and rubbing against the front panel.

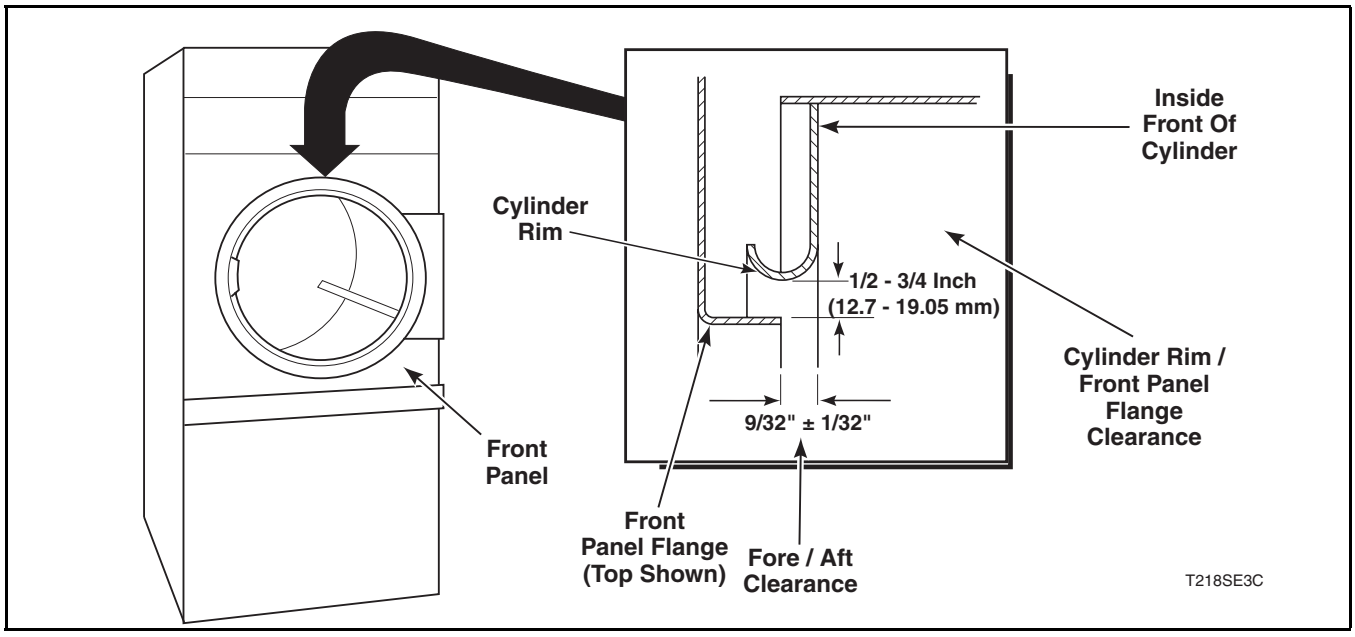
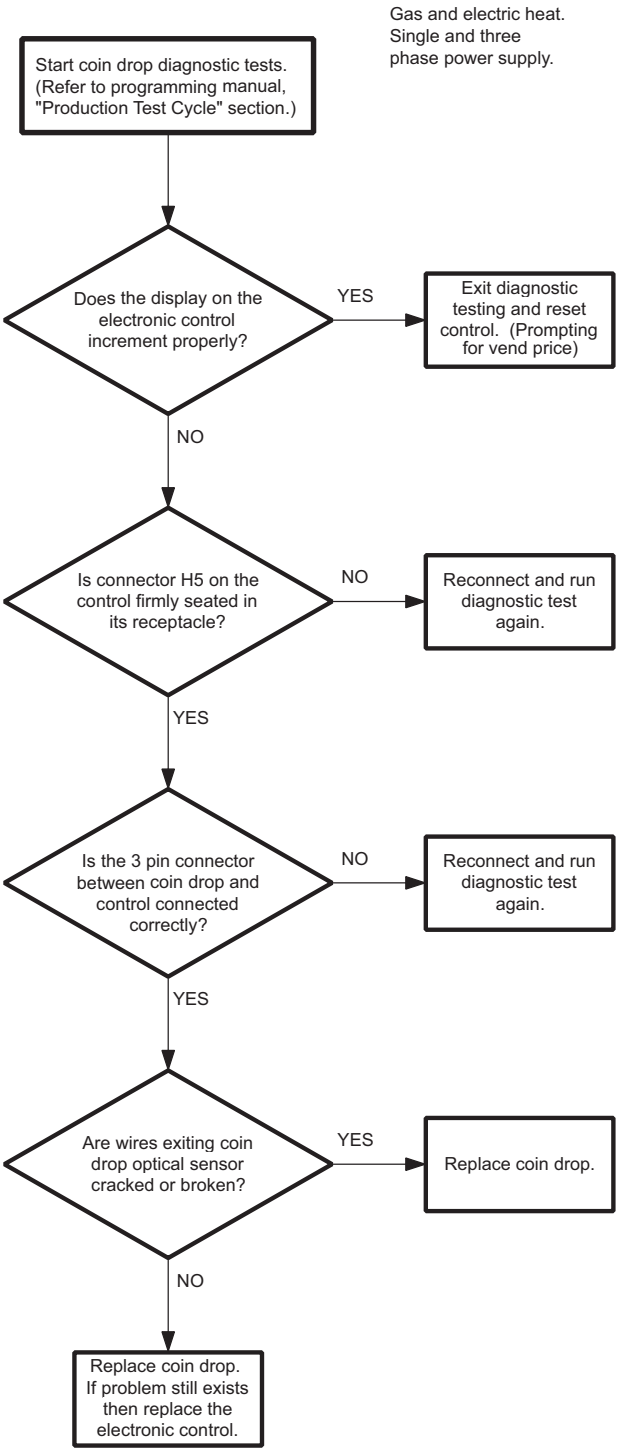


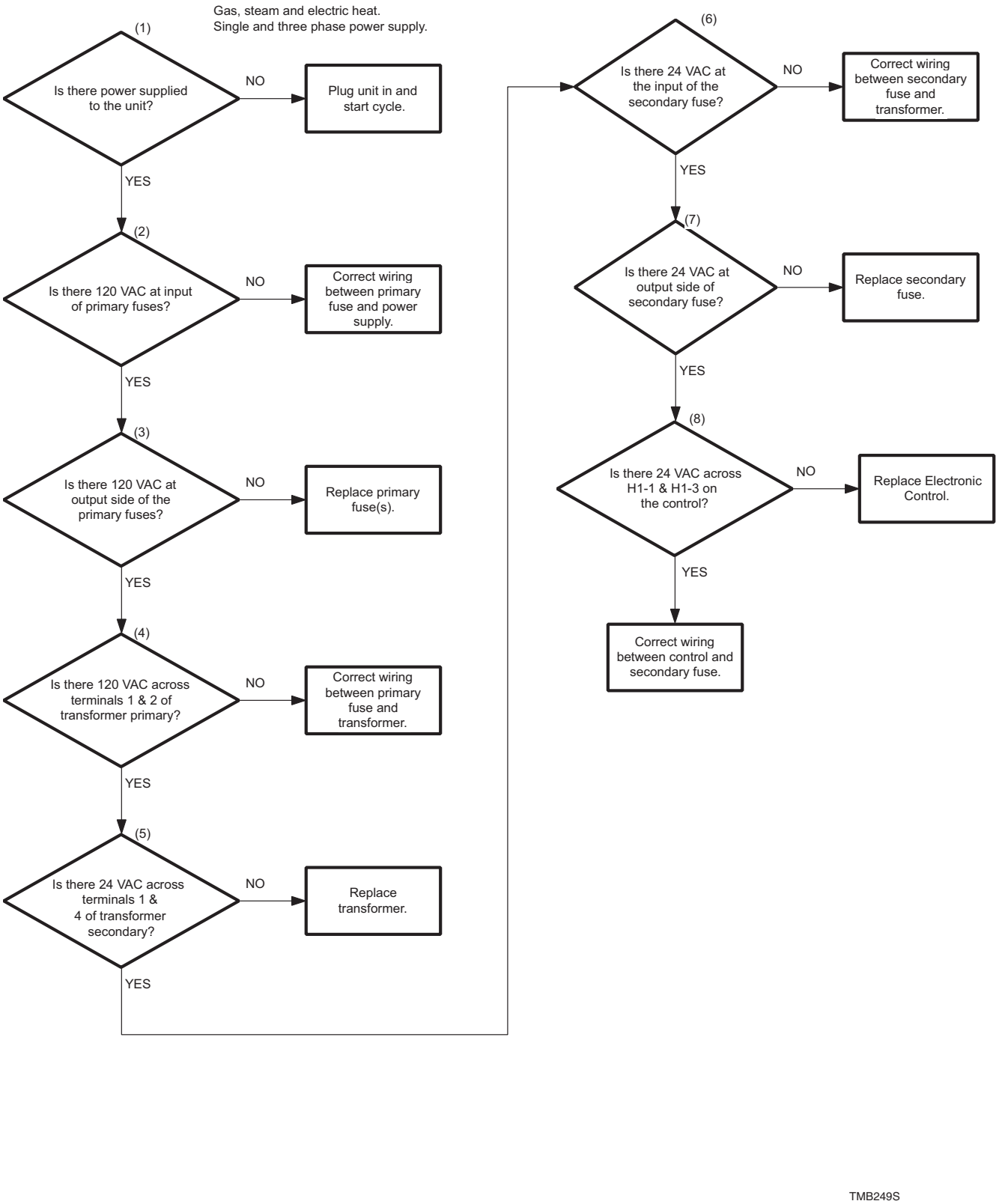
Figure 6

Section 5
Micro Display Control (MDC) Troubleshooting

37. Coins Ignored When Entered

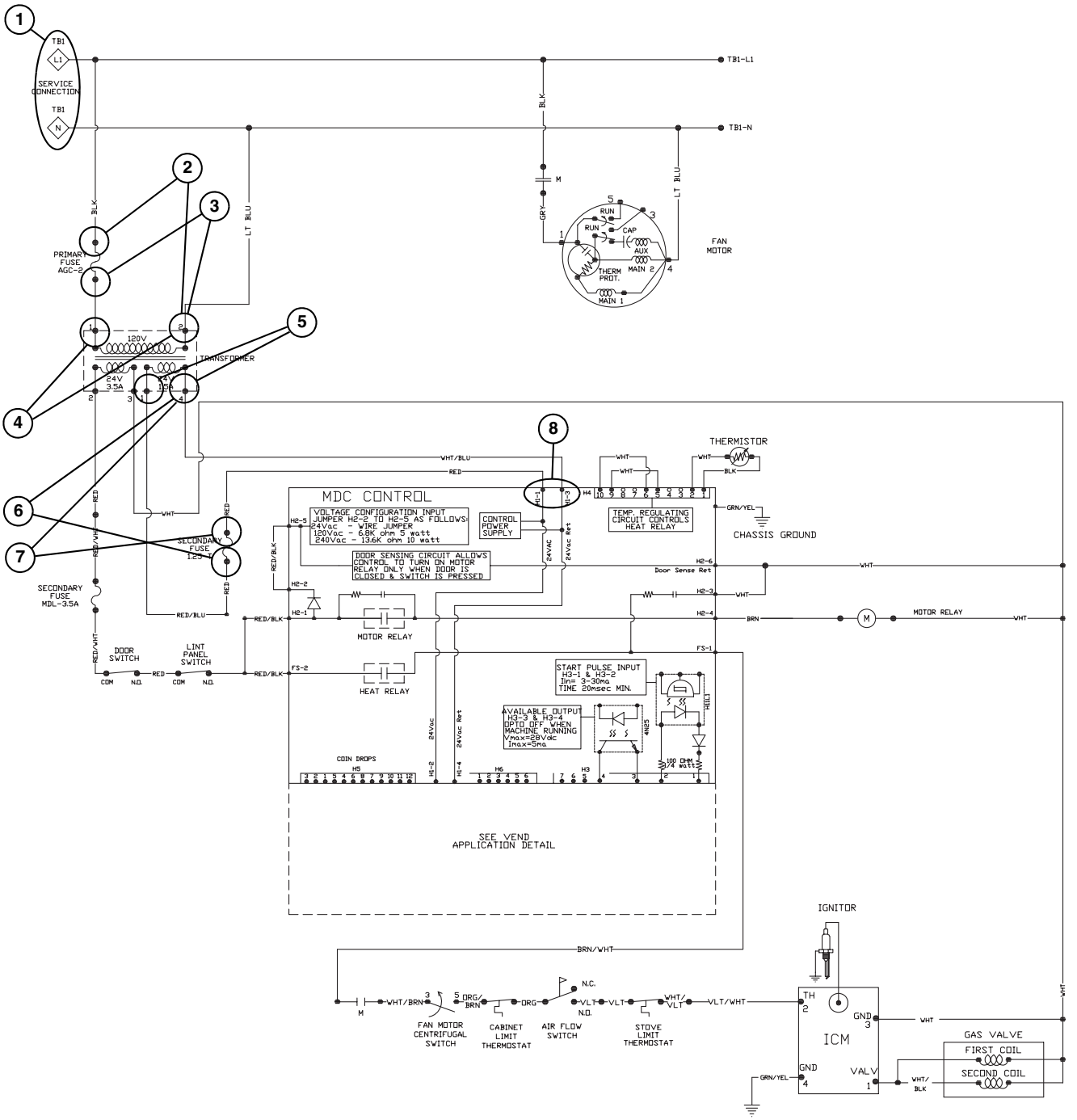


38. Control Has No Display



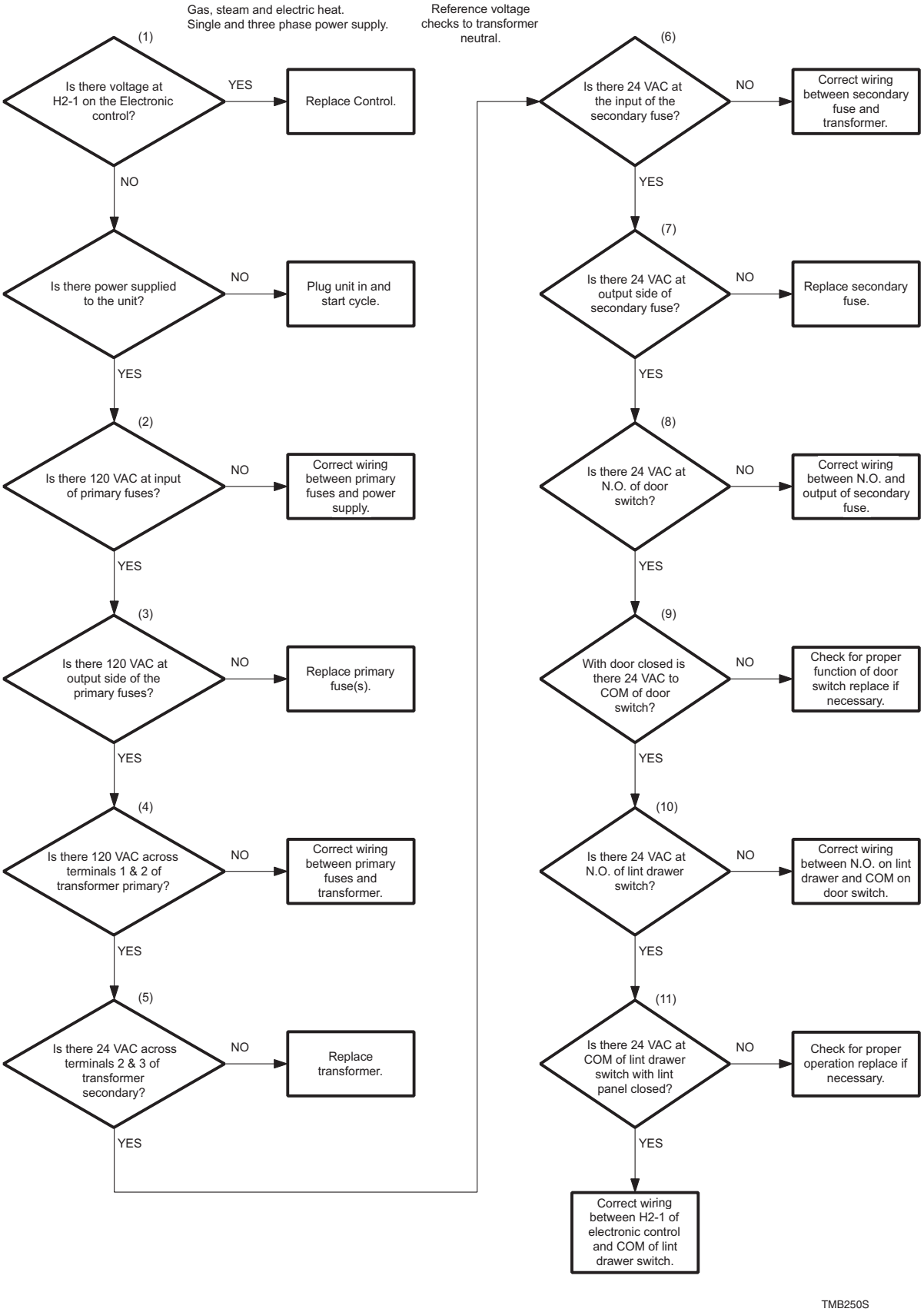
TMB249S

Control Has No Display



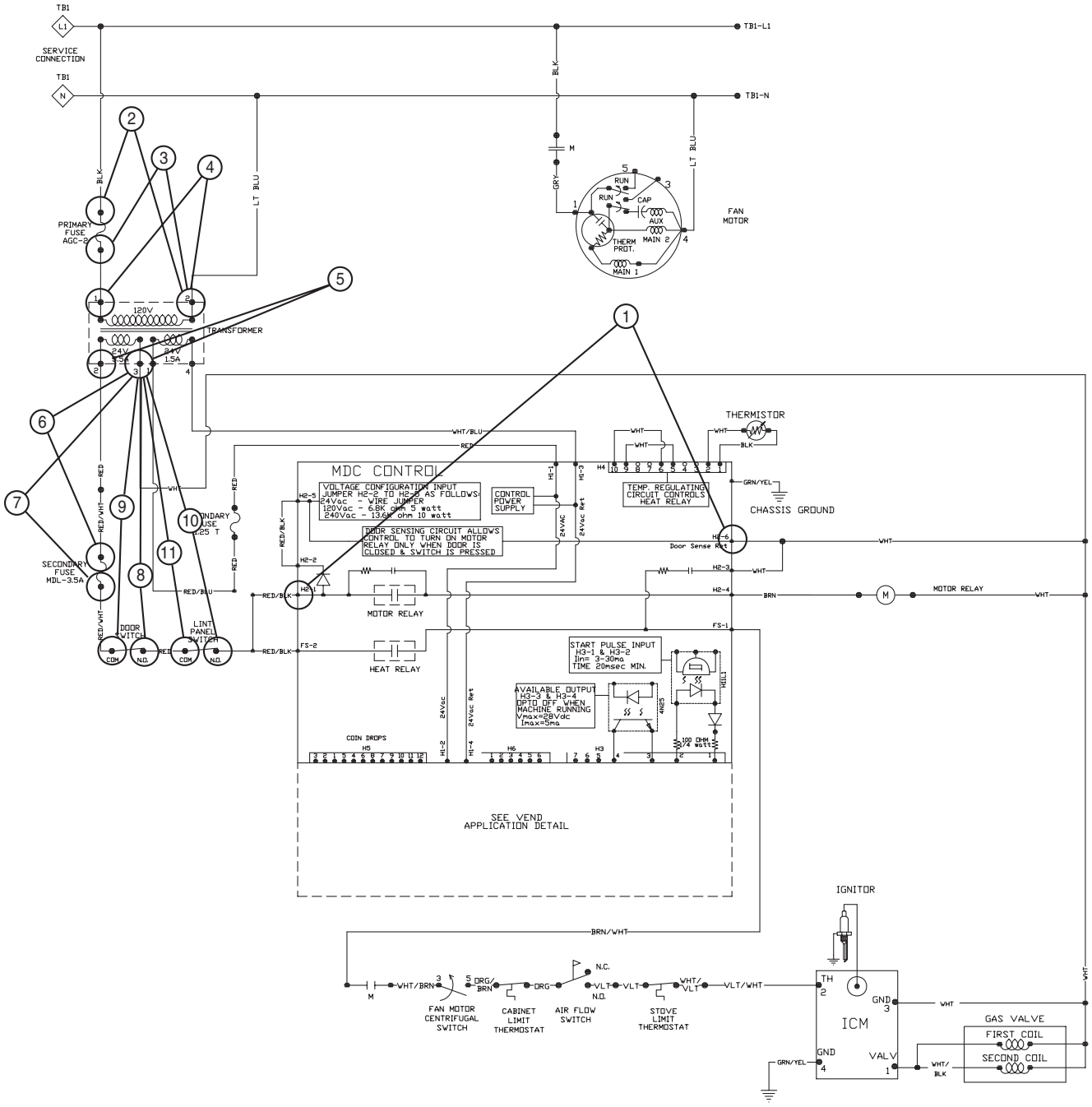
TMB2072S

39. Door Open Indicator



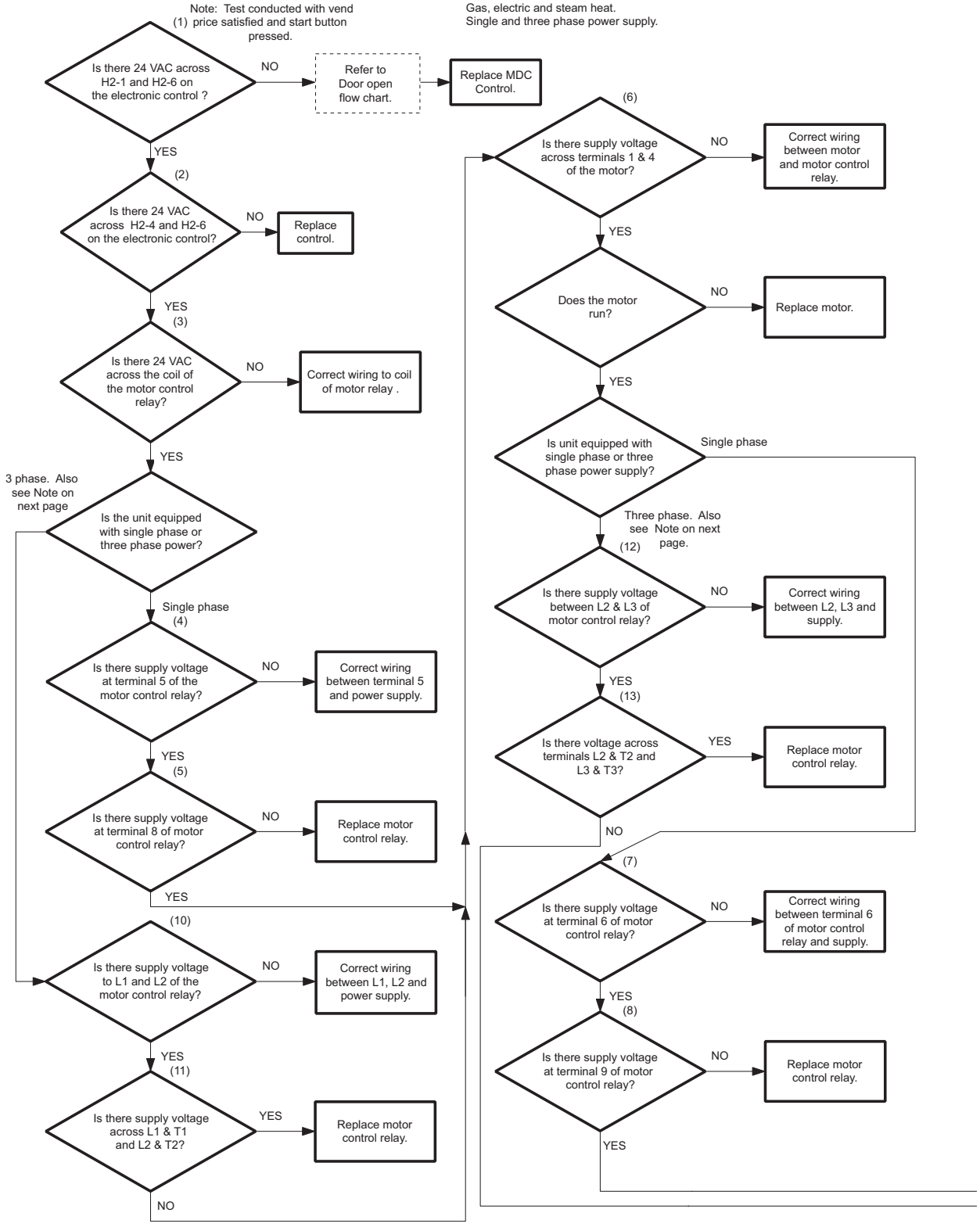
TMB250S

Door Open Indicator

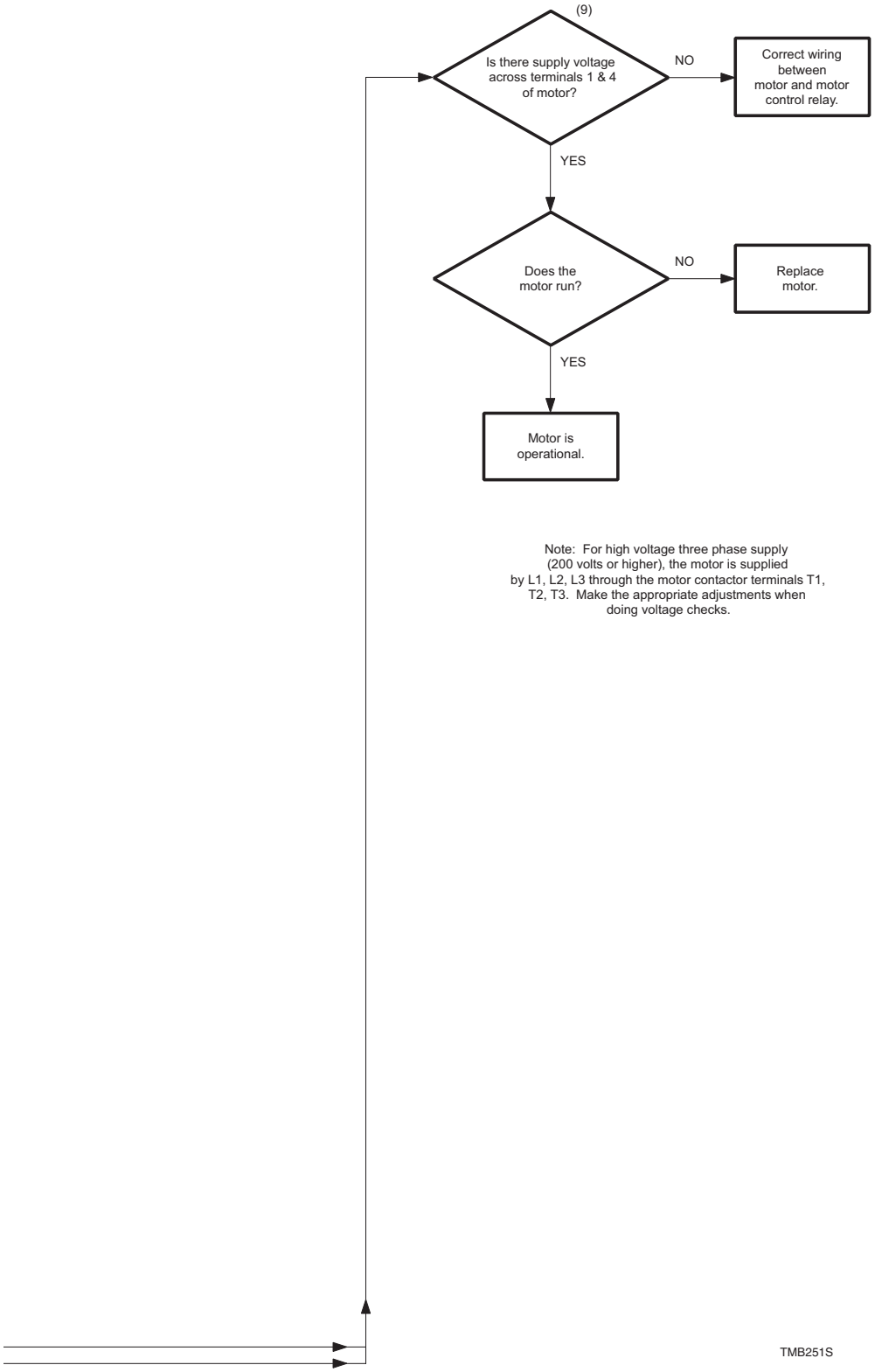


TMB2073S

40. Motor Will Not Start/Run

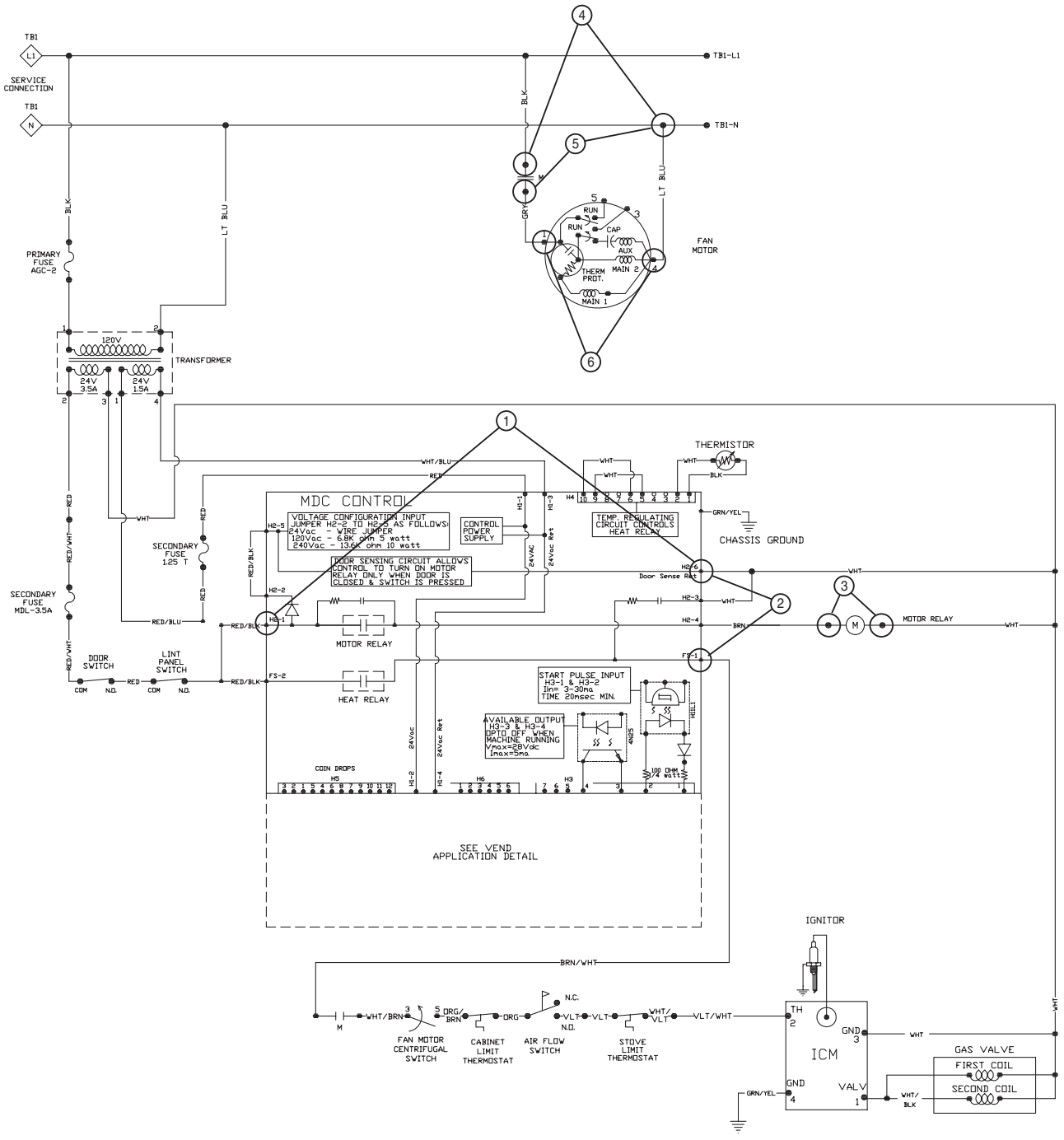


40. Motor Will Not Start/Run (continued)



Please see following page for wiring diagram information.

Motor Will Not Start/Run

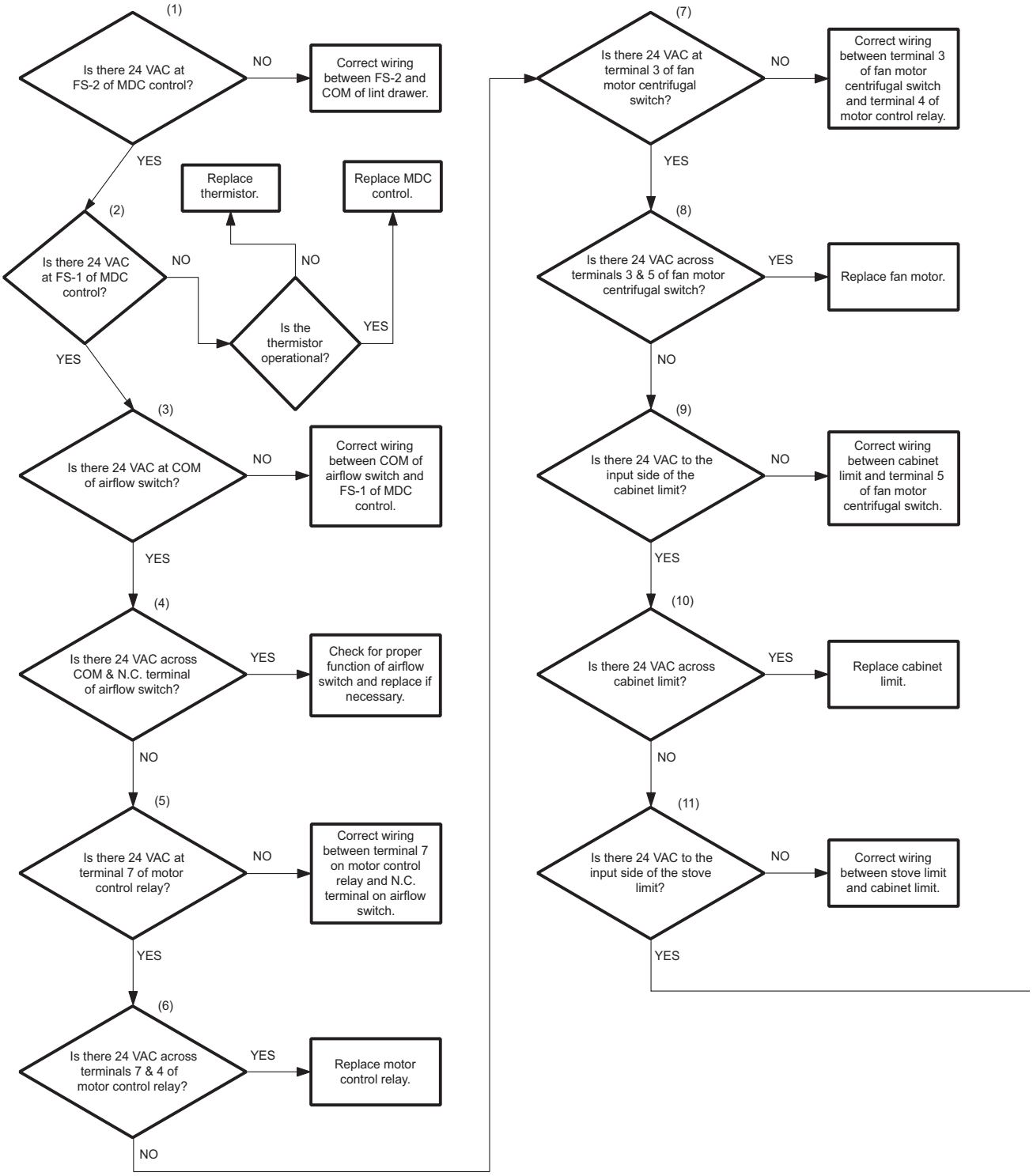


TMB2074S

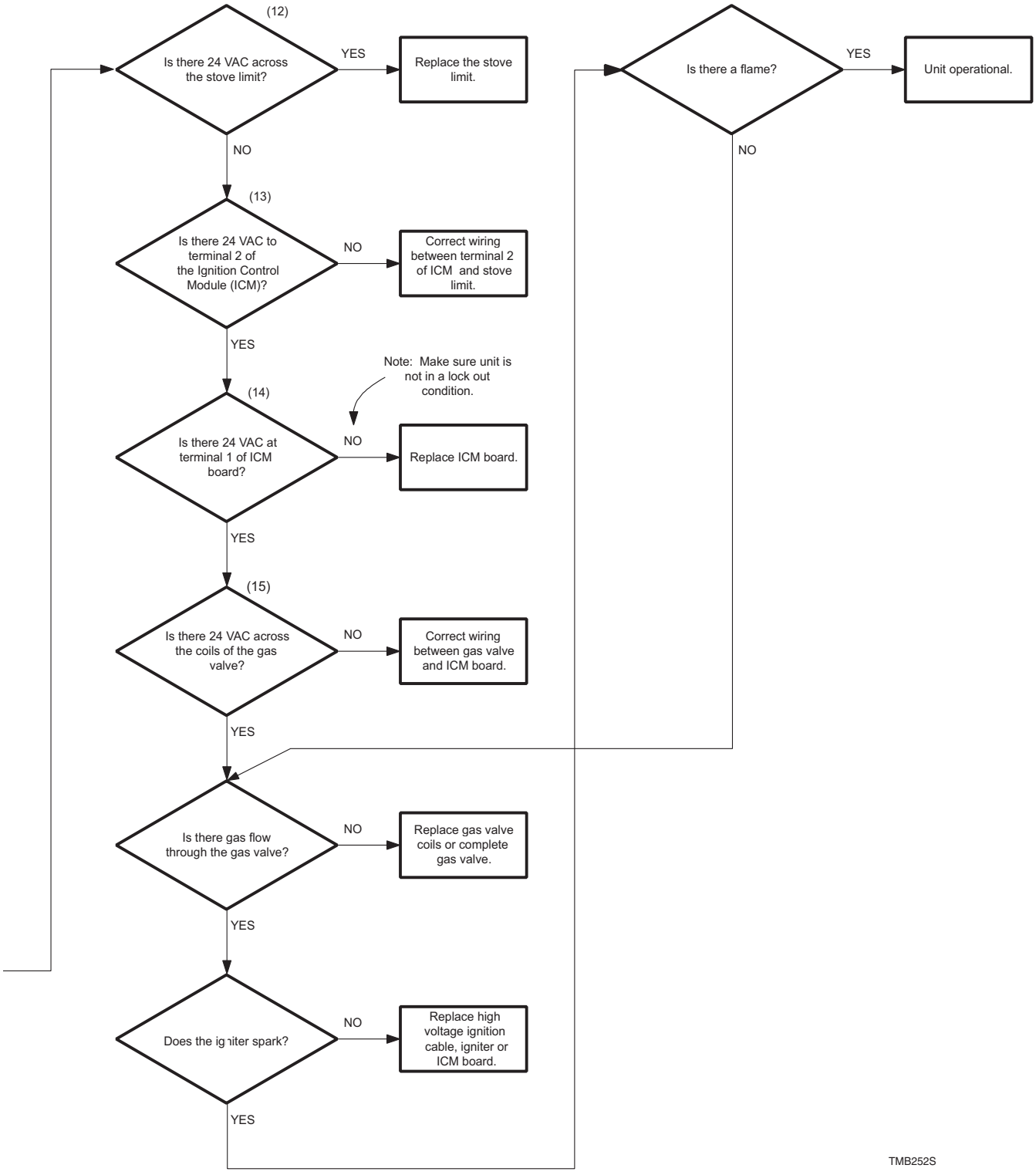
41. Unit Will Not Heat – Gas

Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.

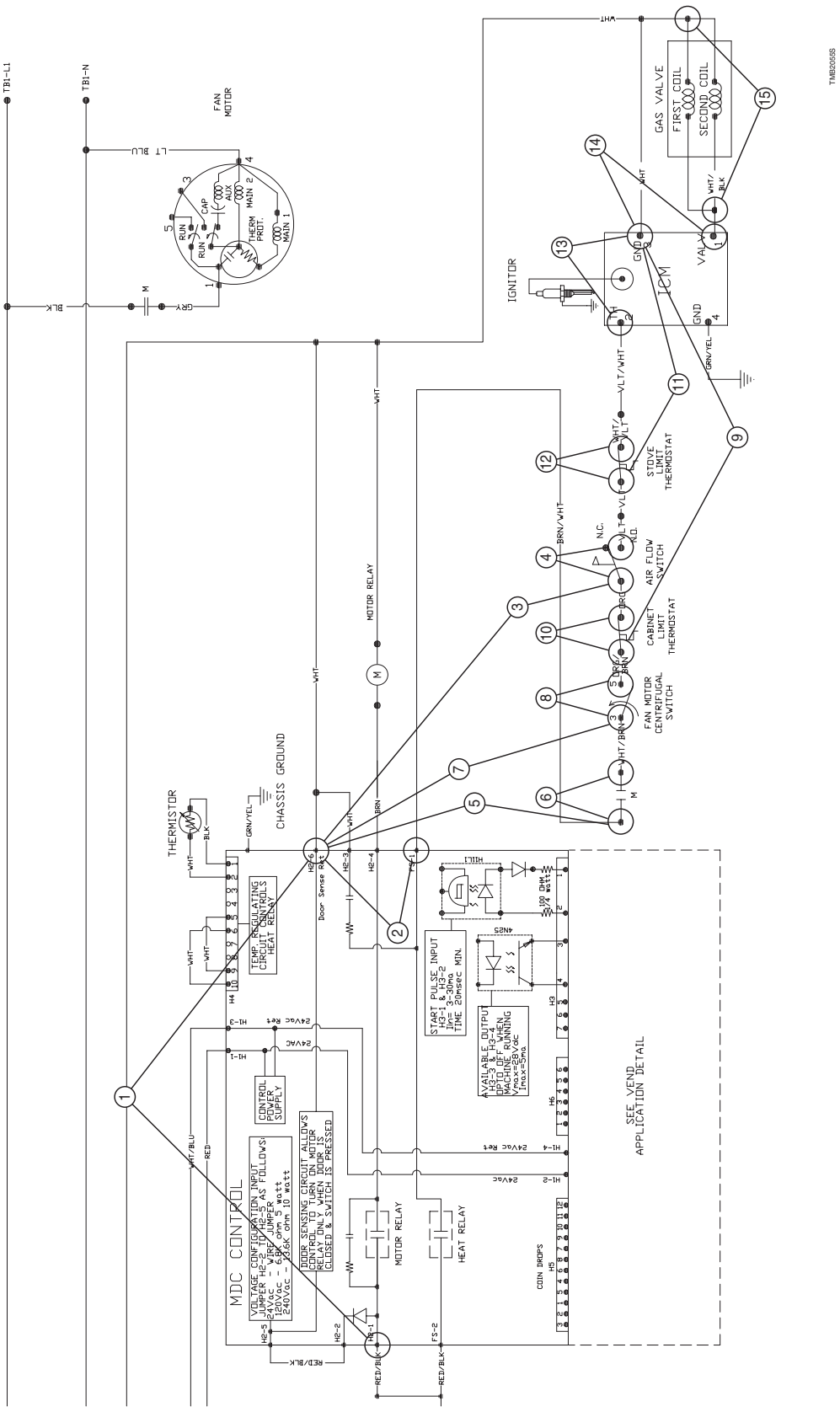


41. Unit Will Not Heat – Gas (continued)



Please see following page for wiring diagram information.

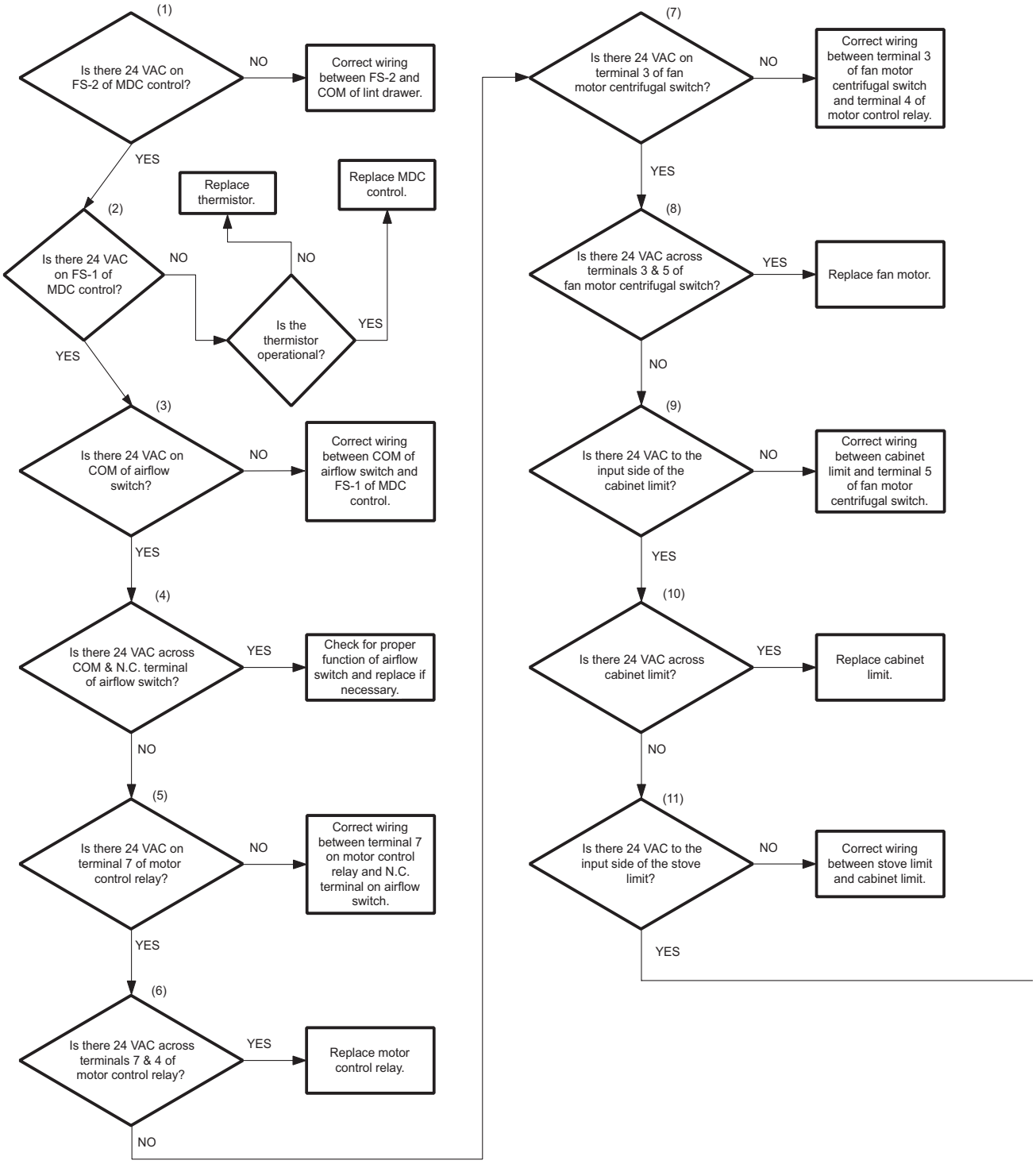
Unit Will Not Heat – Gas



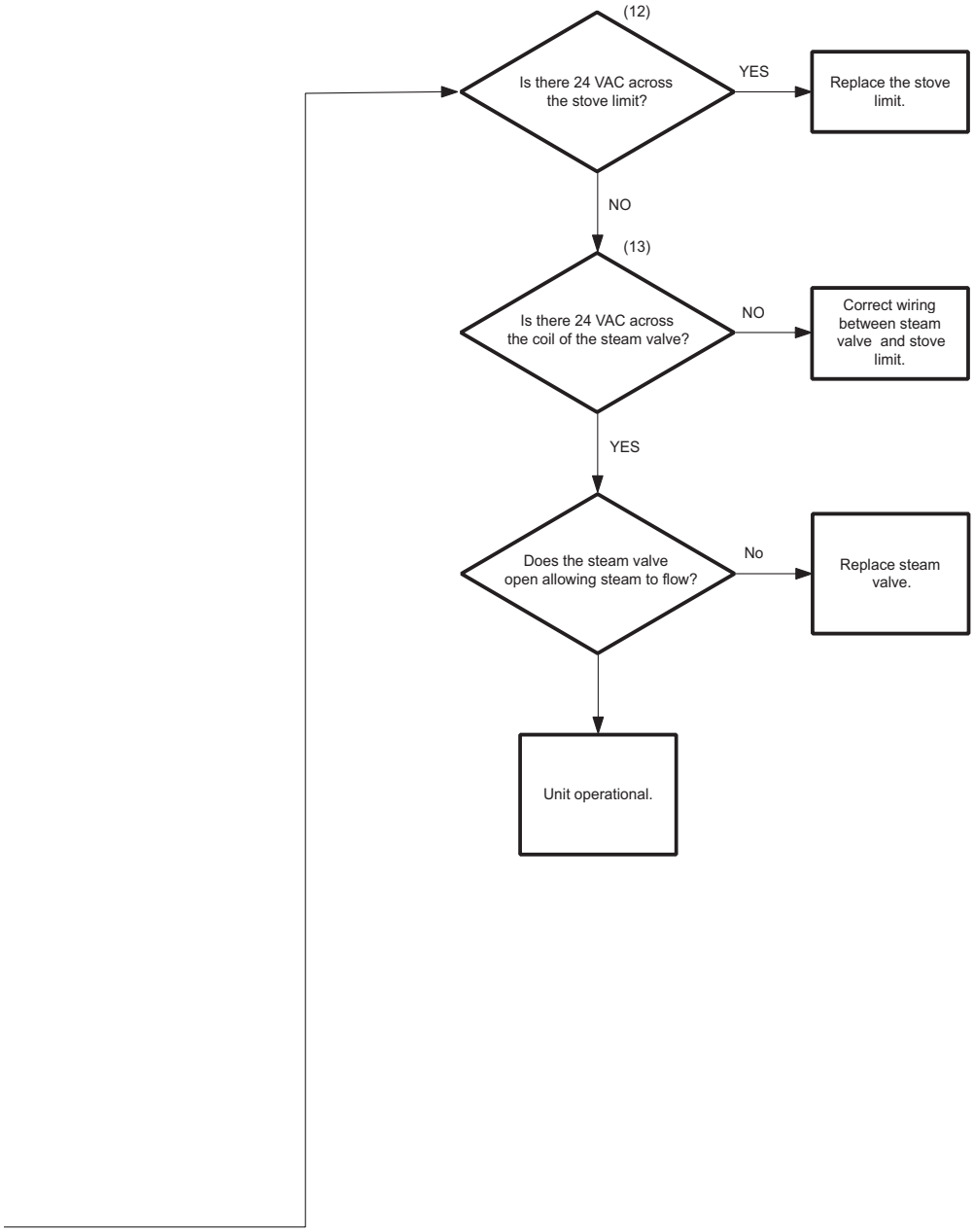
42. Unit Will Not Heat – Steam

Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



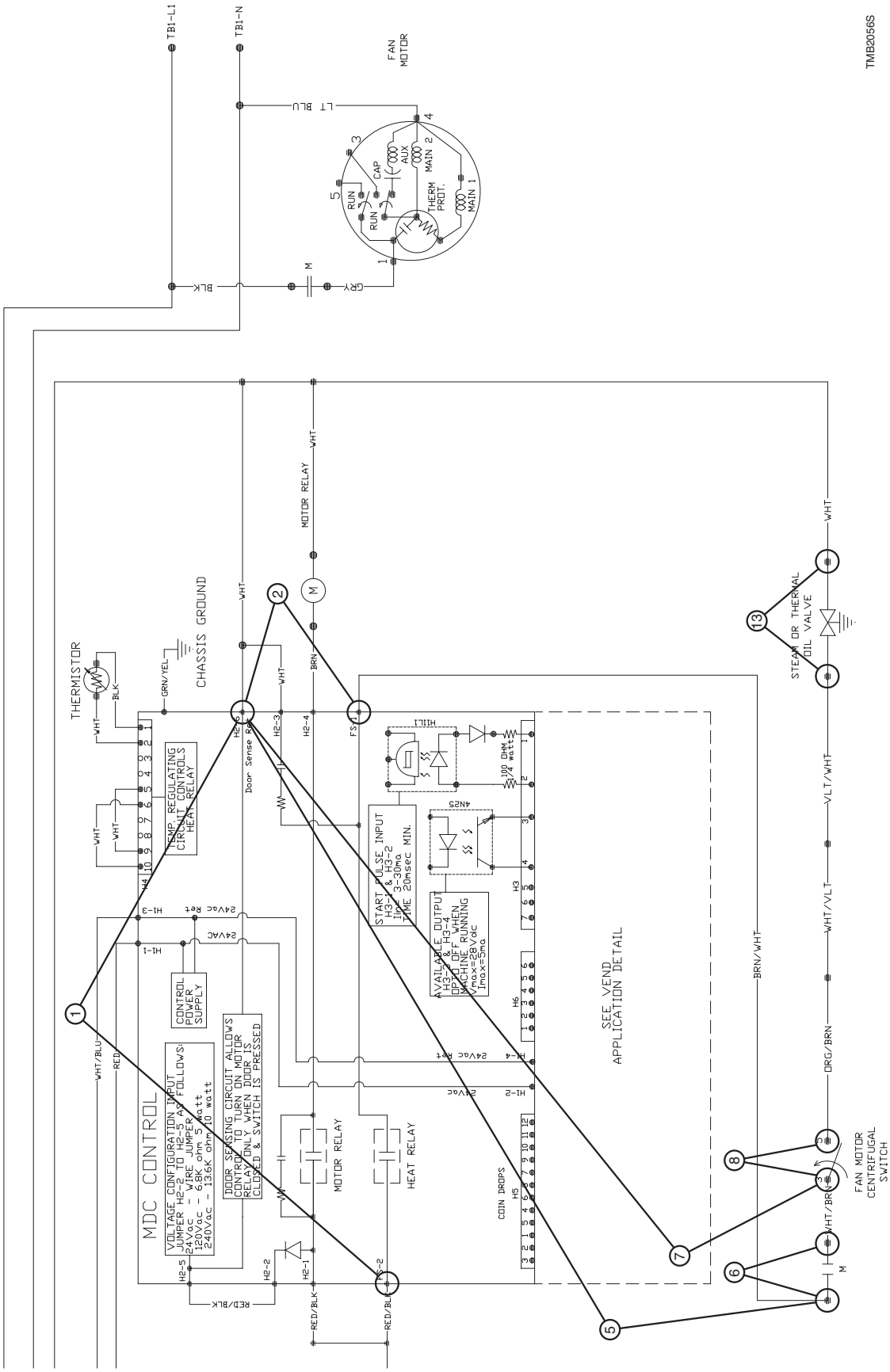
42. Unit Will Not Heat – Steam (continued)



TMB253S

Please see following page for wiring diagram information.

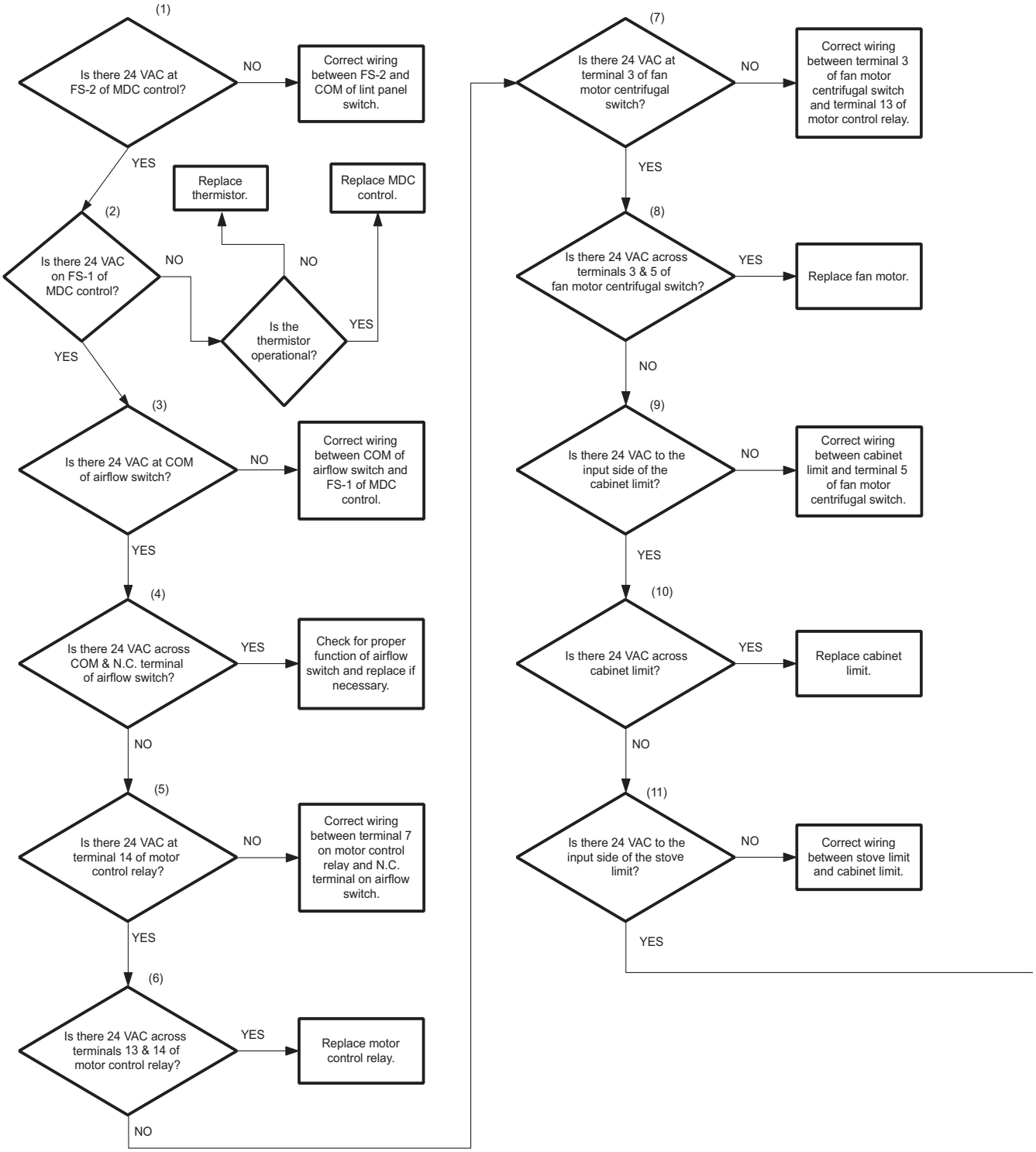
Unit Will Not Heat – Steam



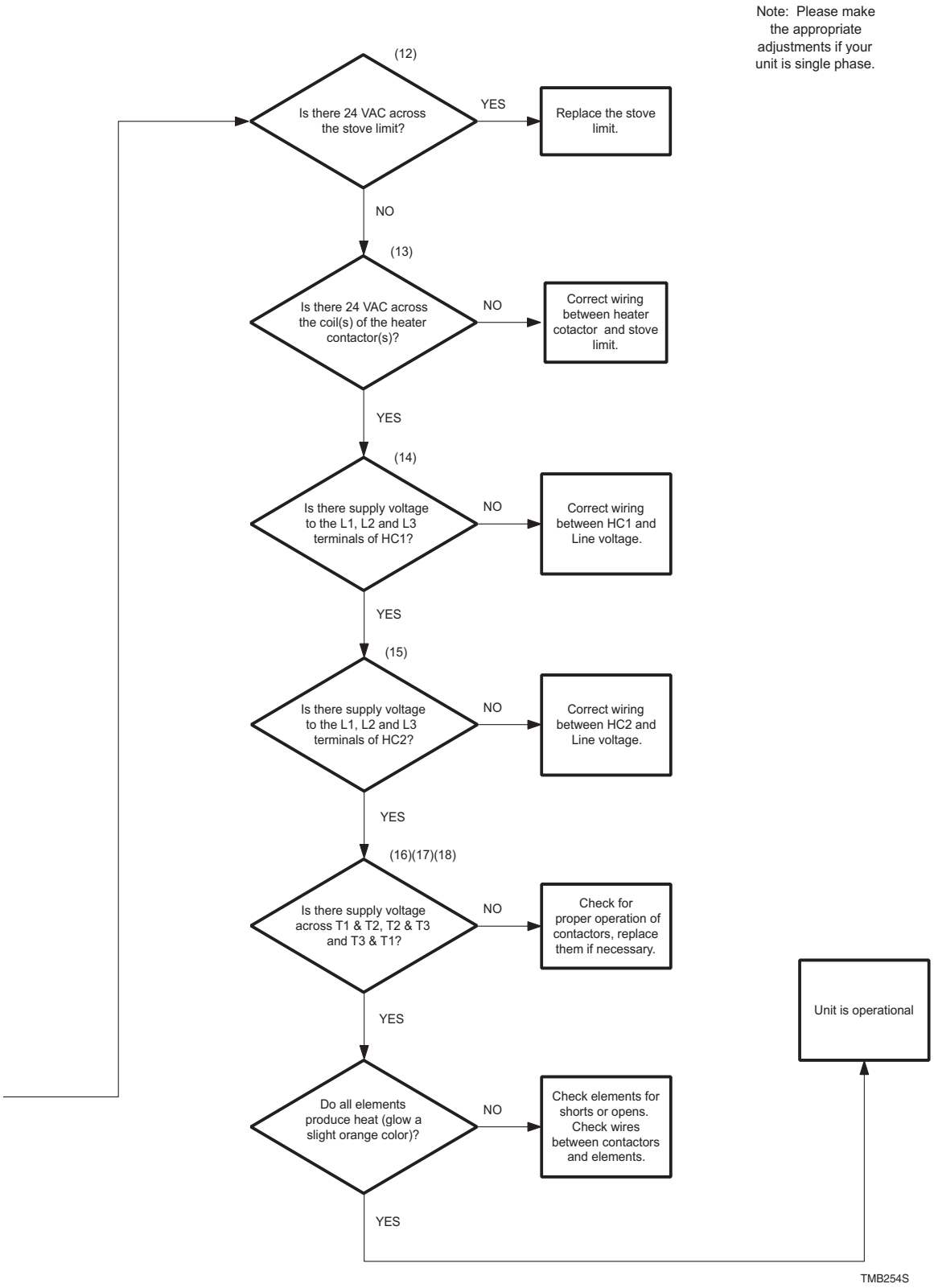
43. Unit Will Not Heat – Electric

Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.

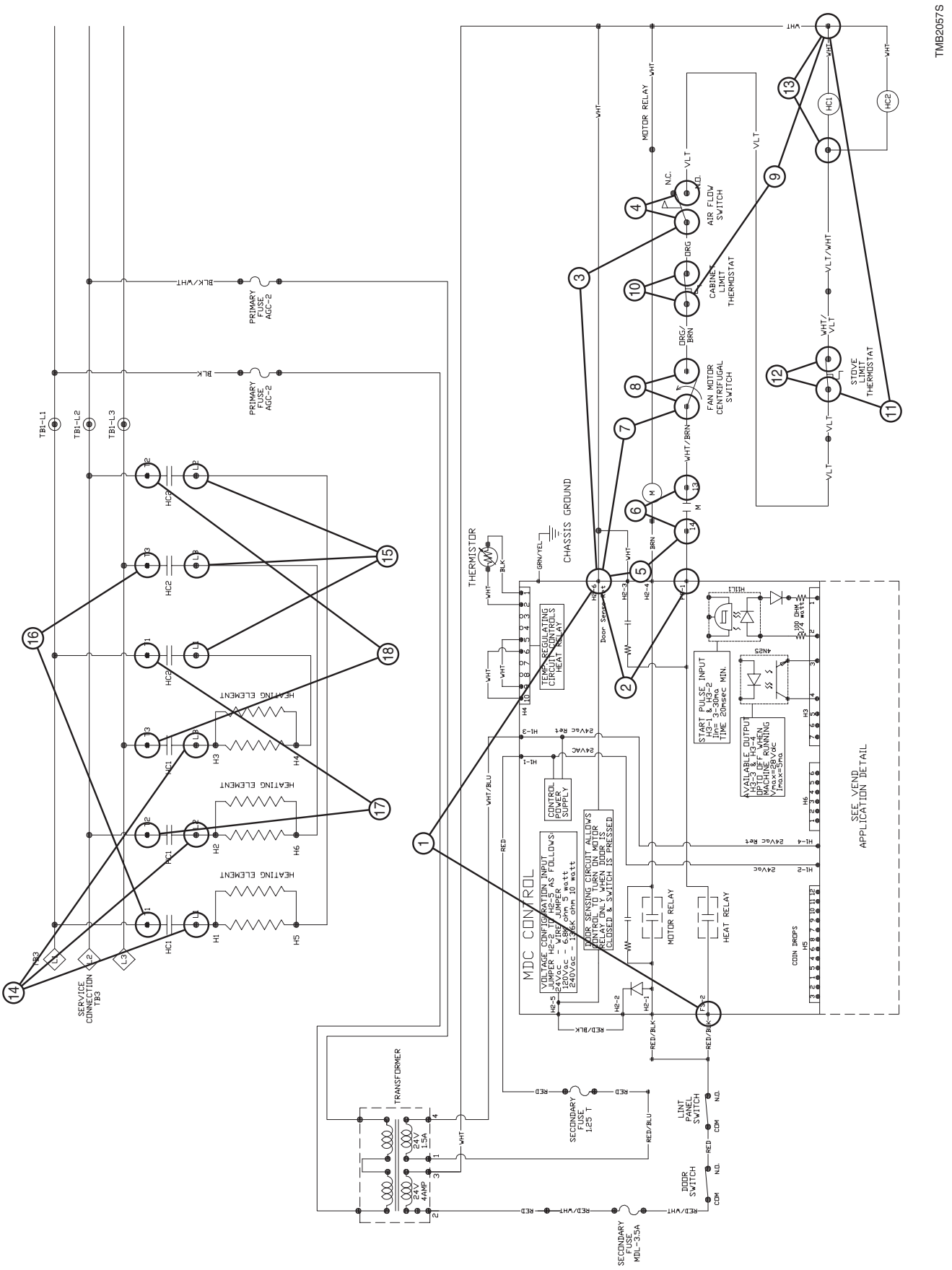


43. Unit Will Not Heat – Electric (continued)



Please see following page for wiring diagram information.

Unit Will Not Heat – Electric



WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the dryer(s) before servicing.**
- **Close gas shut-off valve to gas dryer(s) before servicing.**
- **Never start the dryer(s) with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the dryer is properly grounded.**

W001R1

44. Error Codes

OP - Indicates physical "open" in the thermistor circuit. Possible causes are: 1) thermistor, 2) wiring between control and thermistor, 3) control.
SH - Indicates a "short" in the thermistor circuit. Possible causes are: 1) shorted thermistor, 2) a short in the wiring between control and thermistor, 3) control.

Card Reader Machines: (In addition to the above errors)

EC:19 - Indicates no card reader communication. The control and the reader cannot communicate. Check reader, control and harness.

NOTE: For all other card reader errors, consult the card reader manual provided by the manufacturer.

Display	Definition	Corrective Action
OP	Indicates an open circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Indicates a short circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
EC:19 *Card Reader models only	Indicates no communication between control and card reader.	• Check card reader. Replace if inoperative. • Check wire harness connecting card reader and control. Replace if inoperative. • Check control. Replace if inoperative.

Section 6
NetMaster Troubleshooting

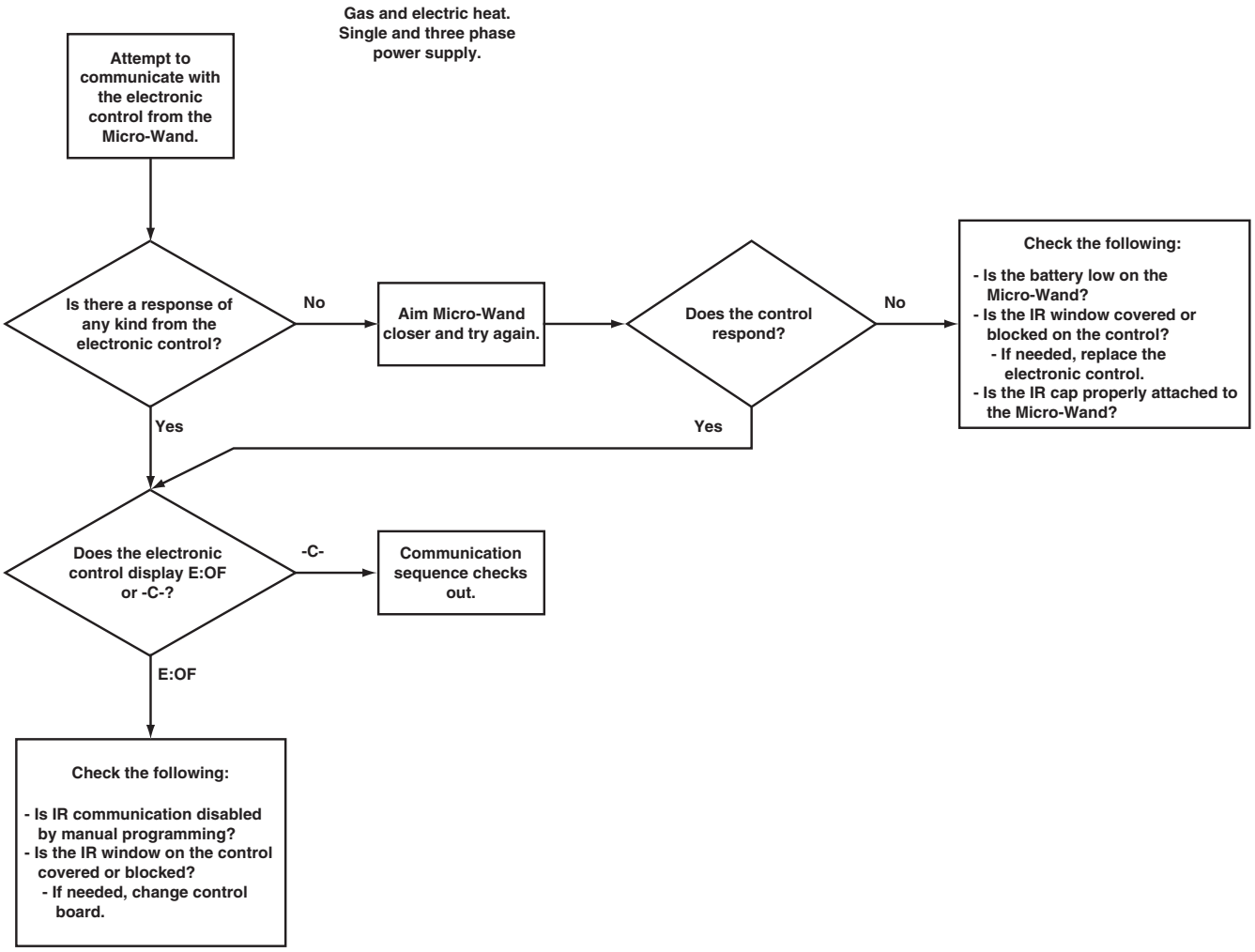
WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

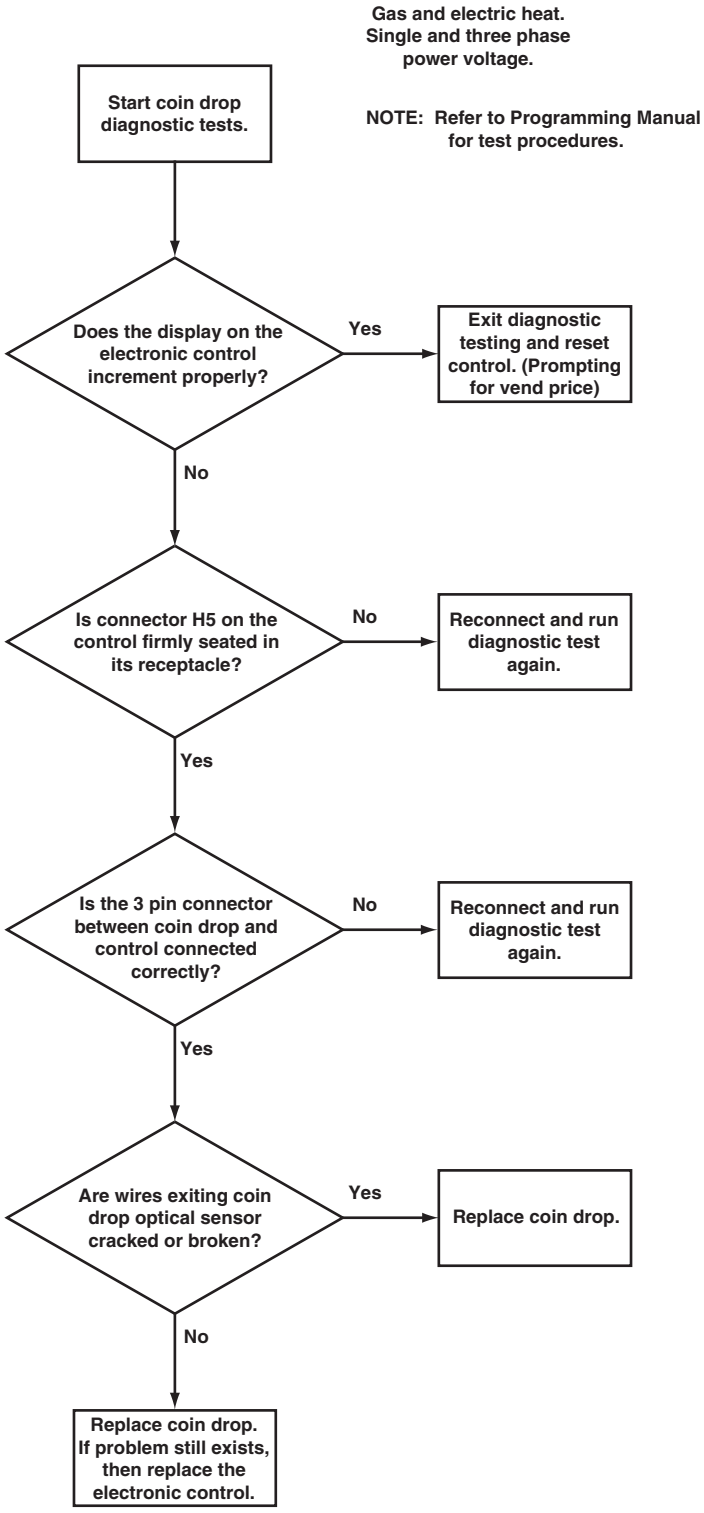
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

45. No Infrared Communication

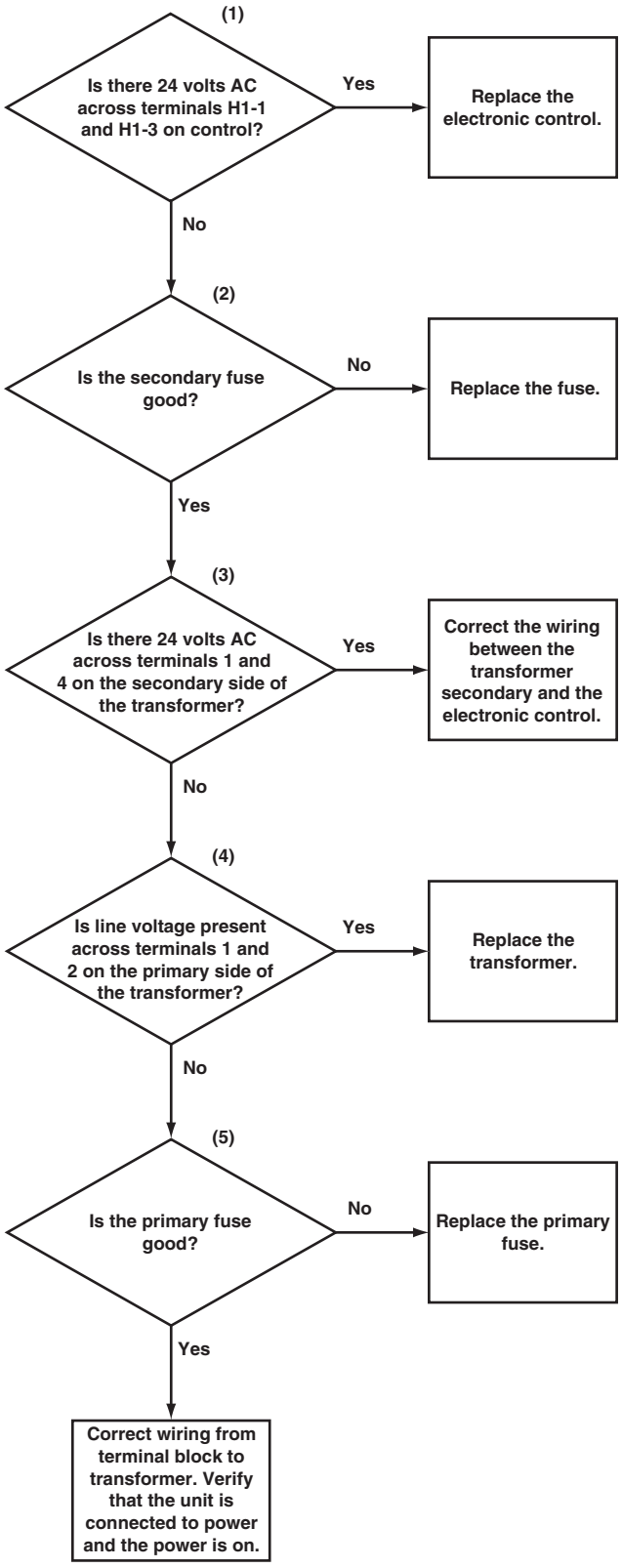


46. Coins Ignored When Entered



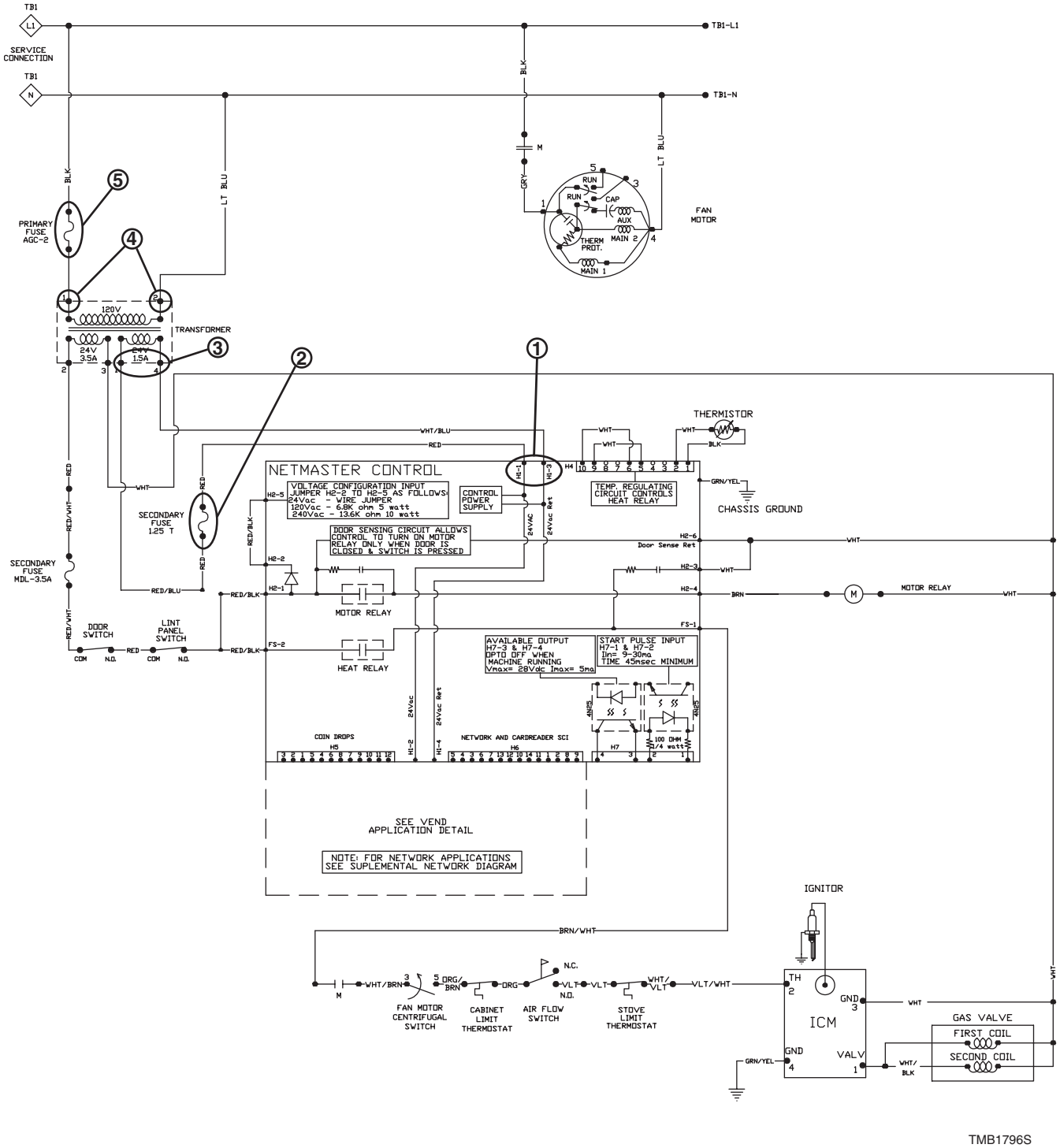
TMB1794S

47. No Display



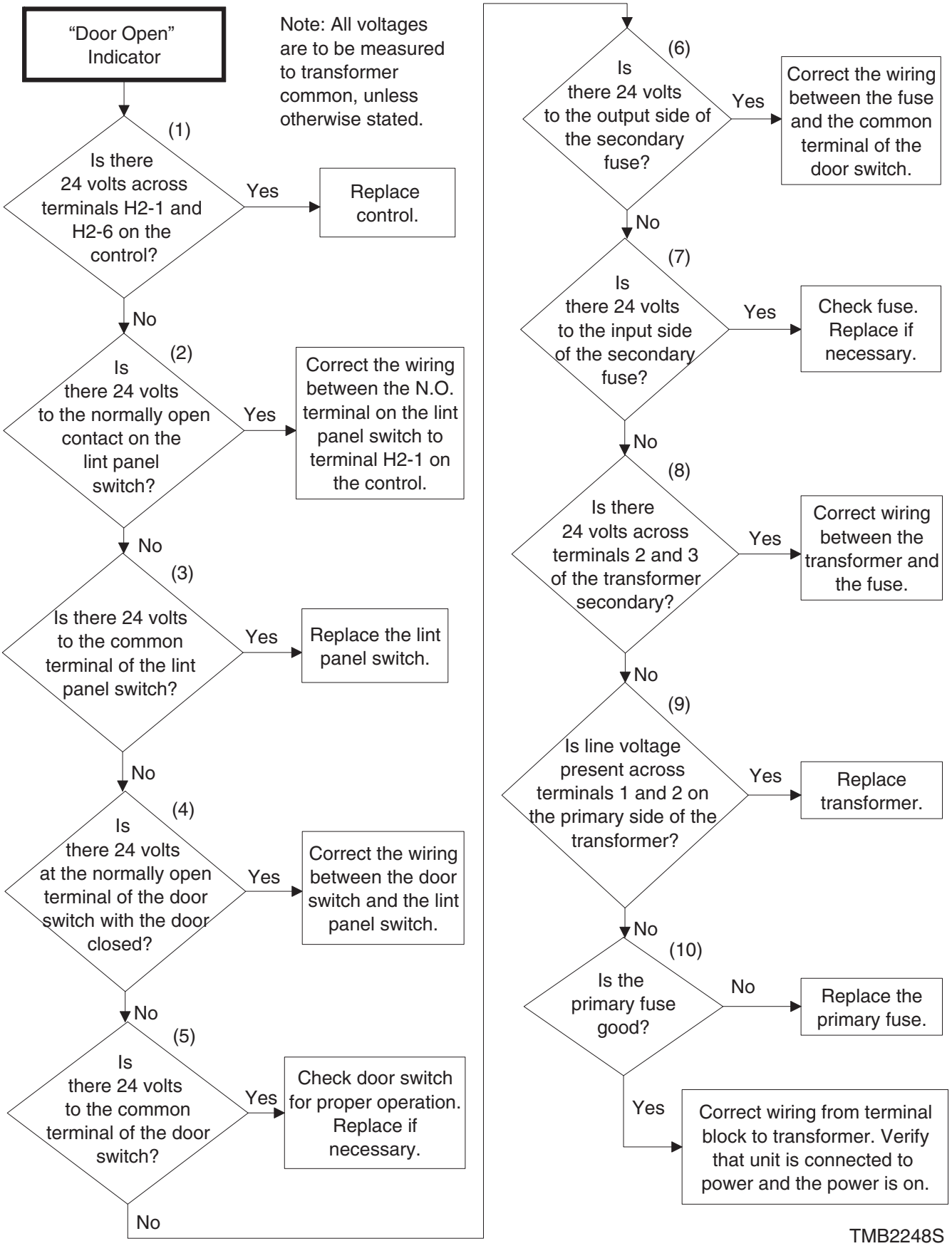
TMB1795S

No Display



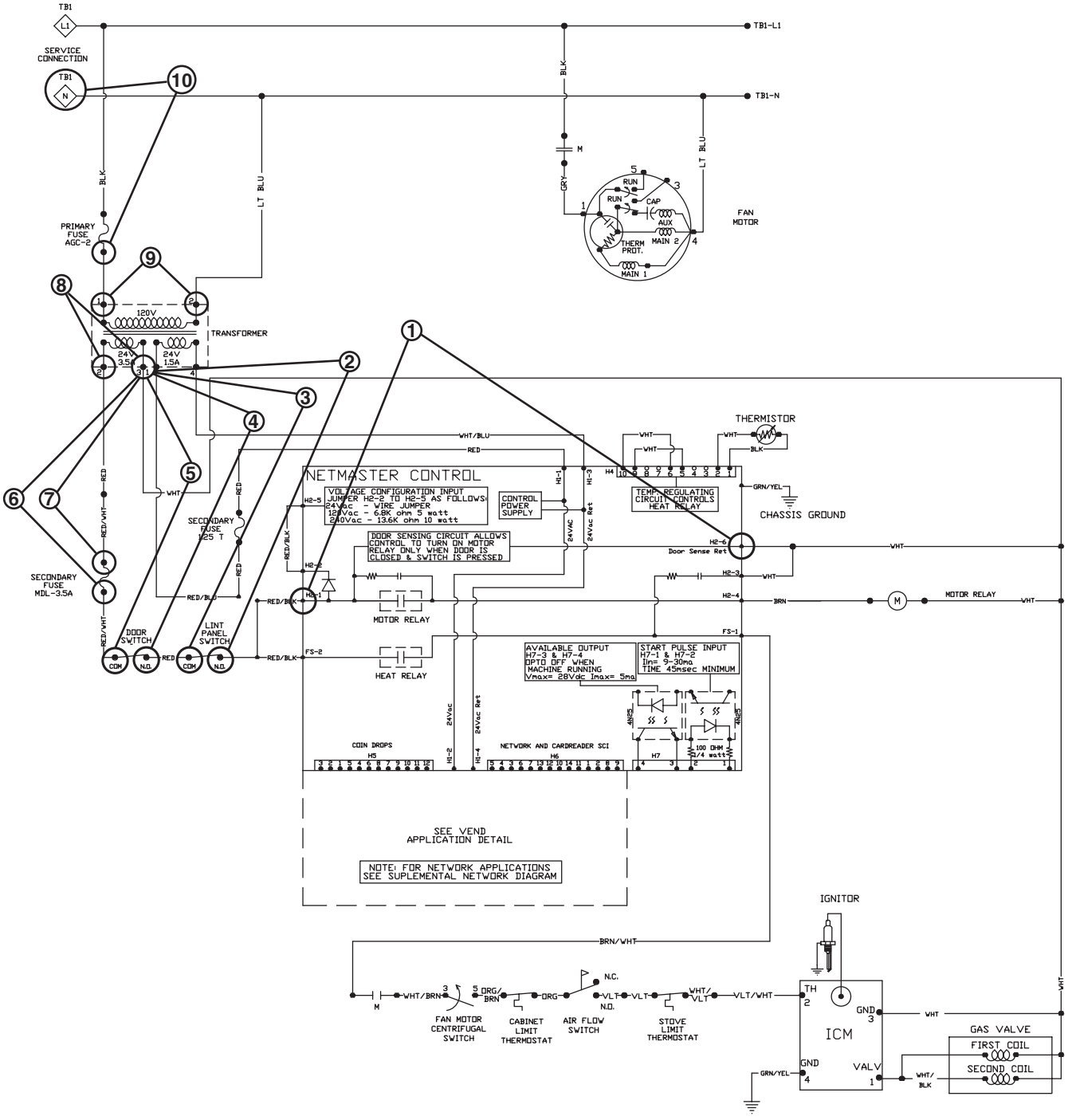
TMB1796S

48. "Door Open" Indicator



TMB2248S

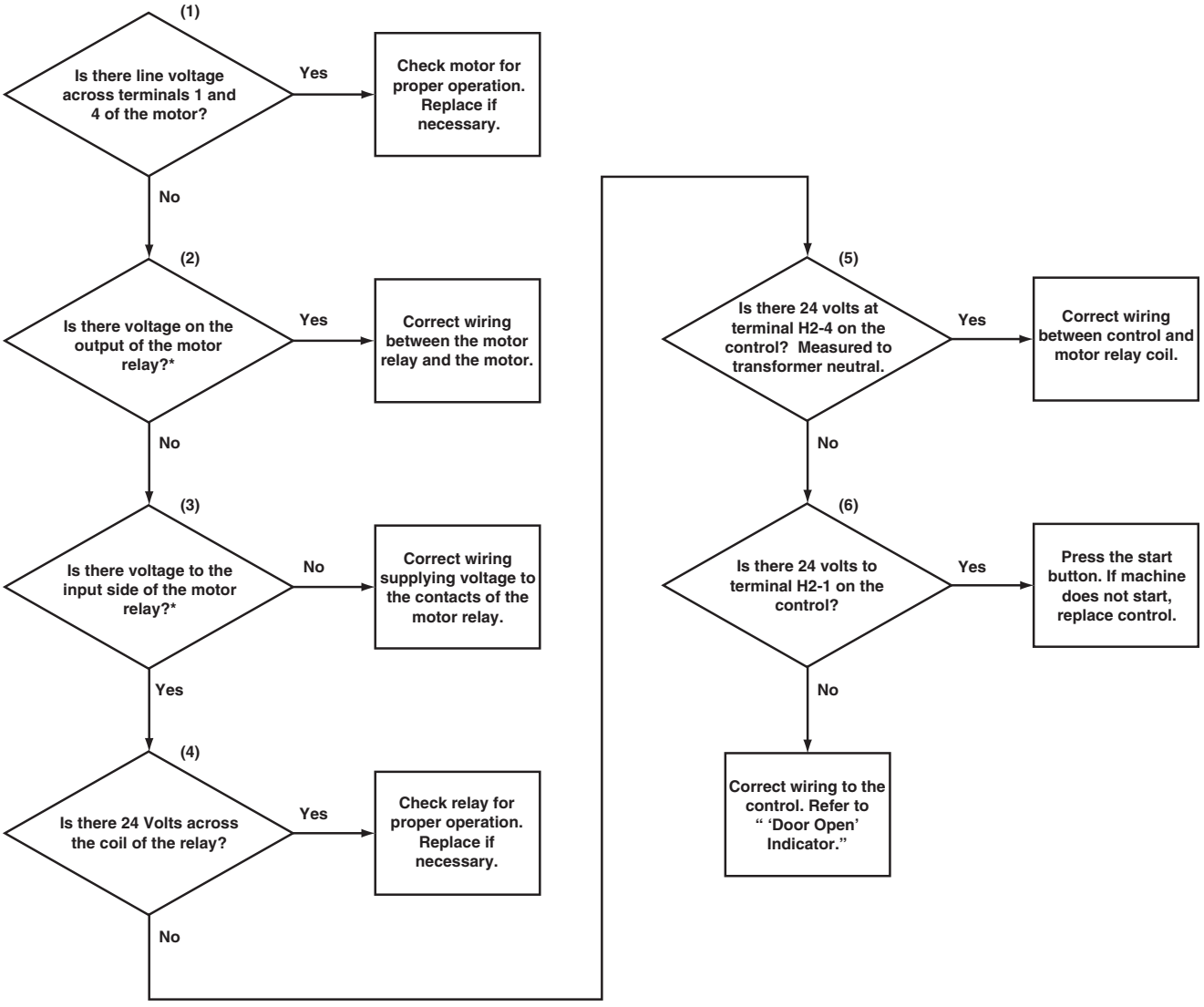
“Door Open” Indicator



TMB2249S

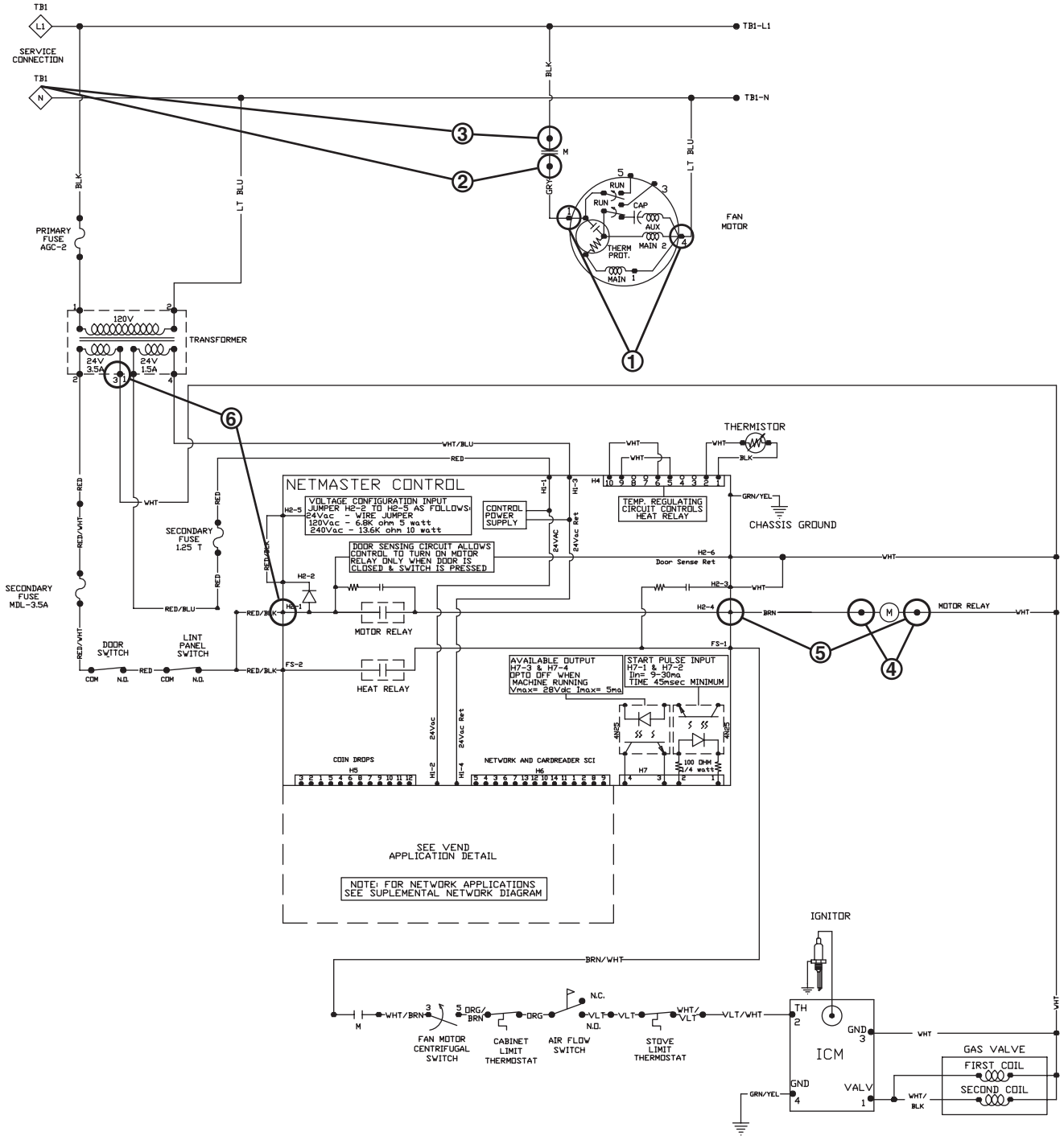
49. No Start/Run

***Note: For steps 2 and 3. For 208/240 1 phase, both lines to the motor are controlled by contacts. Please check second set of contacts. For 3 phase units, the three legs supplied to the moter will be controlled by N.O. contacts. Please check all three legs.**



TMB1799S

No Start/Run

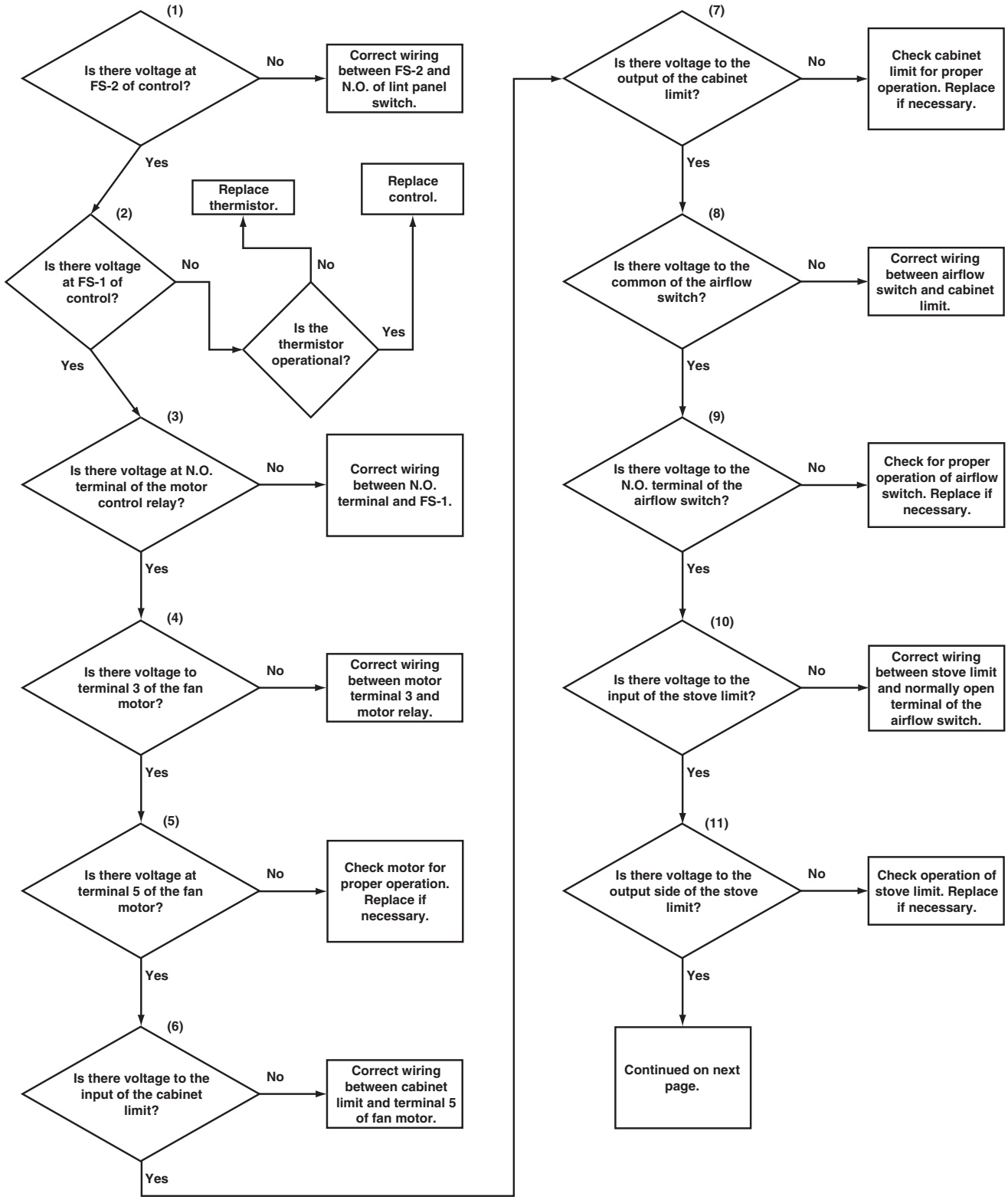


TMB1800S

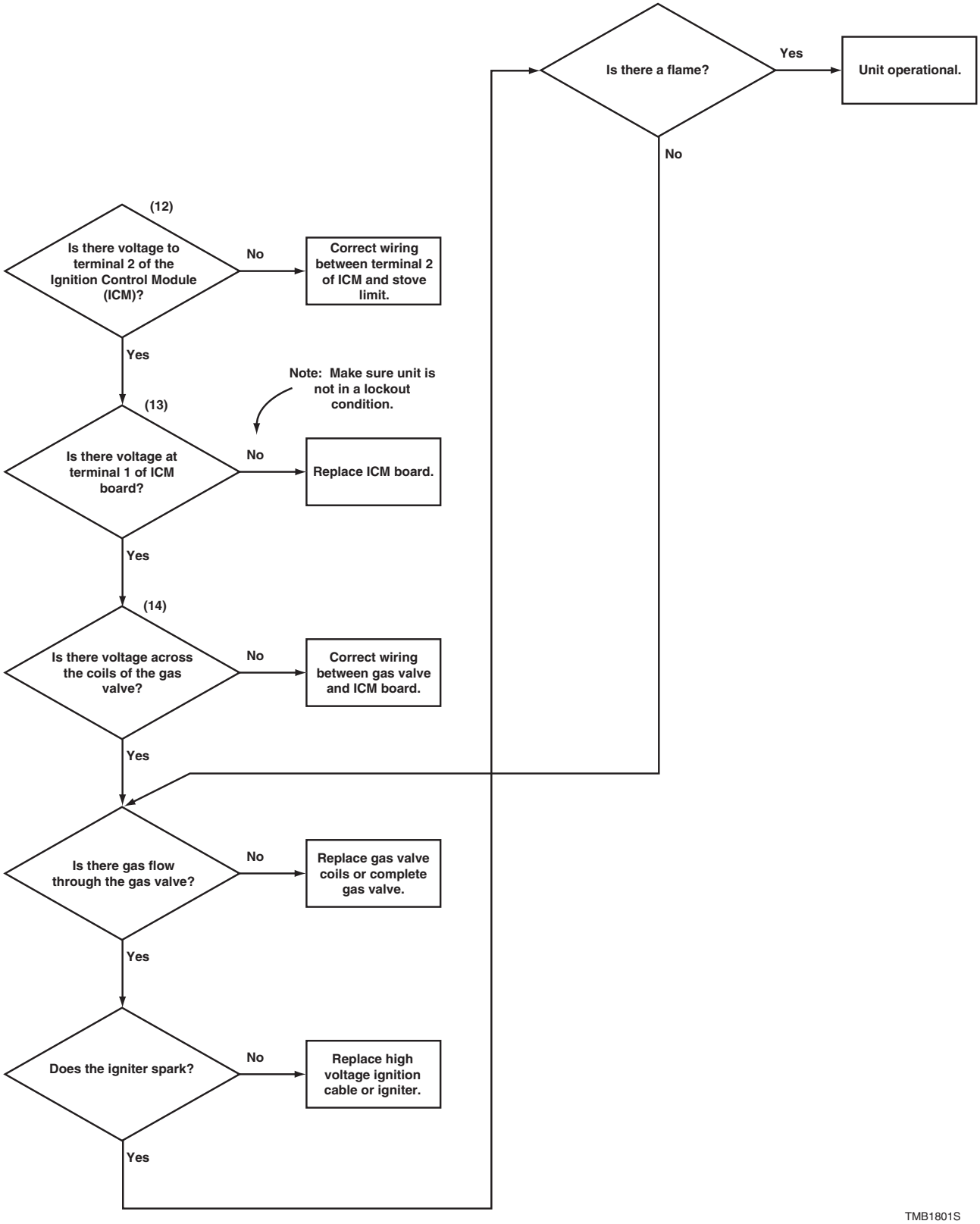
50. Unit Will Not Heat – Gas

Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.

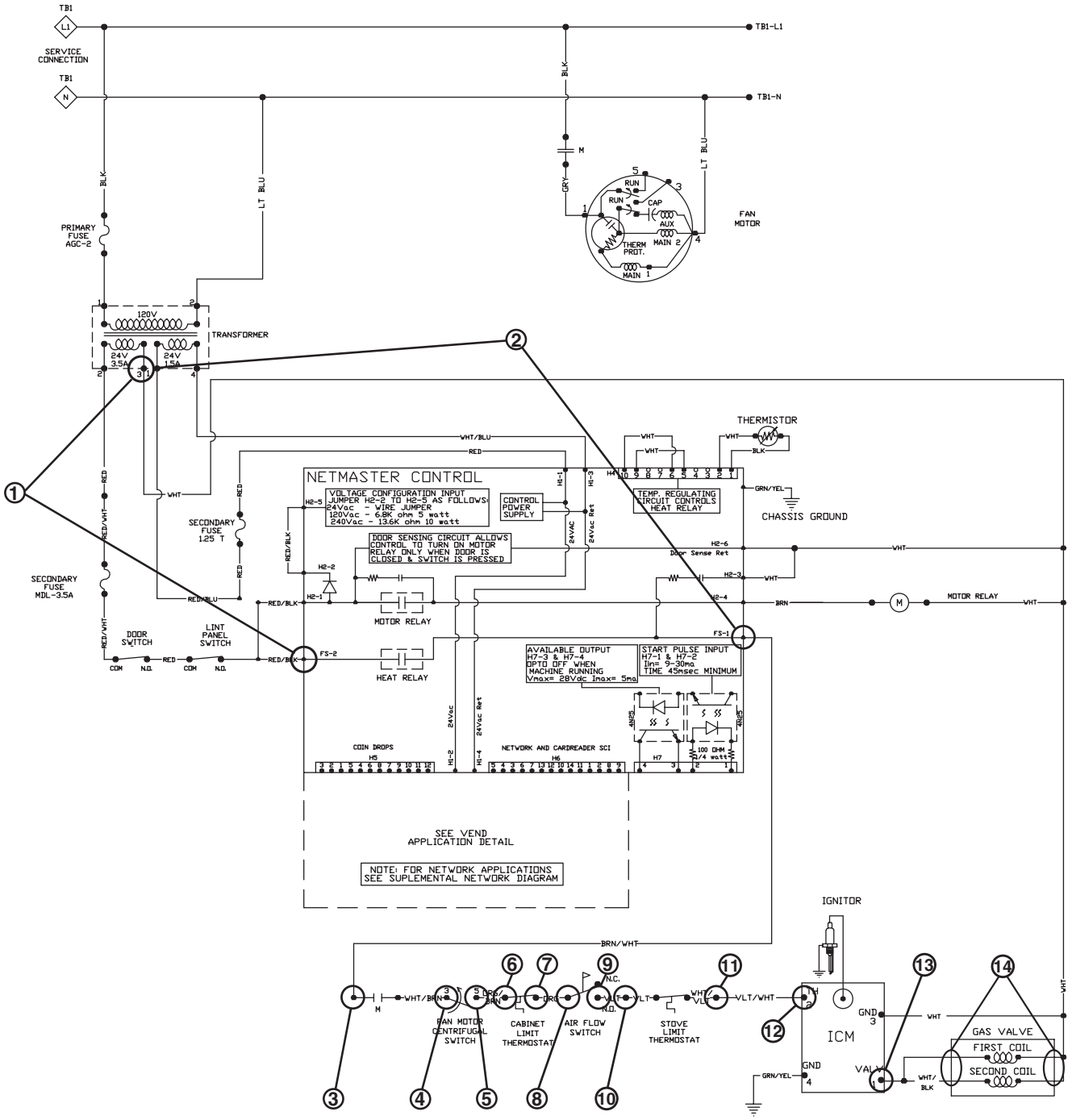


50. Unit Will Not Heat – Gas (continued)



Please see following page for wiring diagram information.

Unit Will Not Heat – Gas

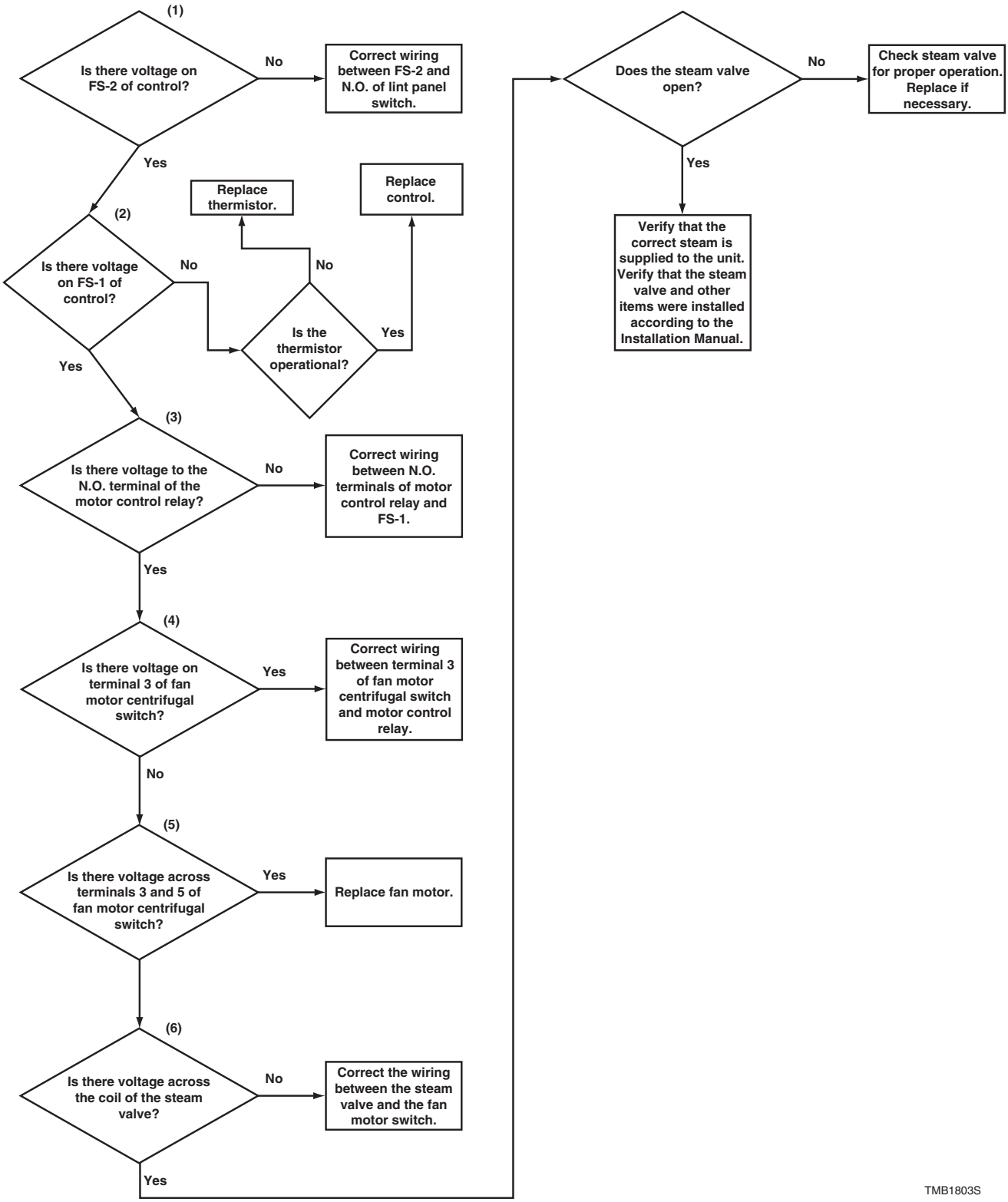


TMB1802S

51. Unit Will Not Heat – Steam

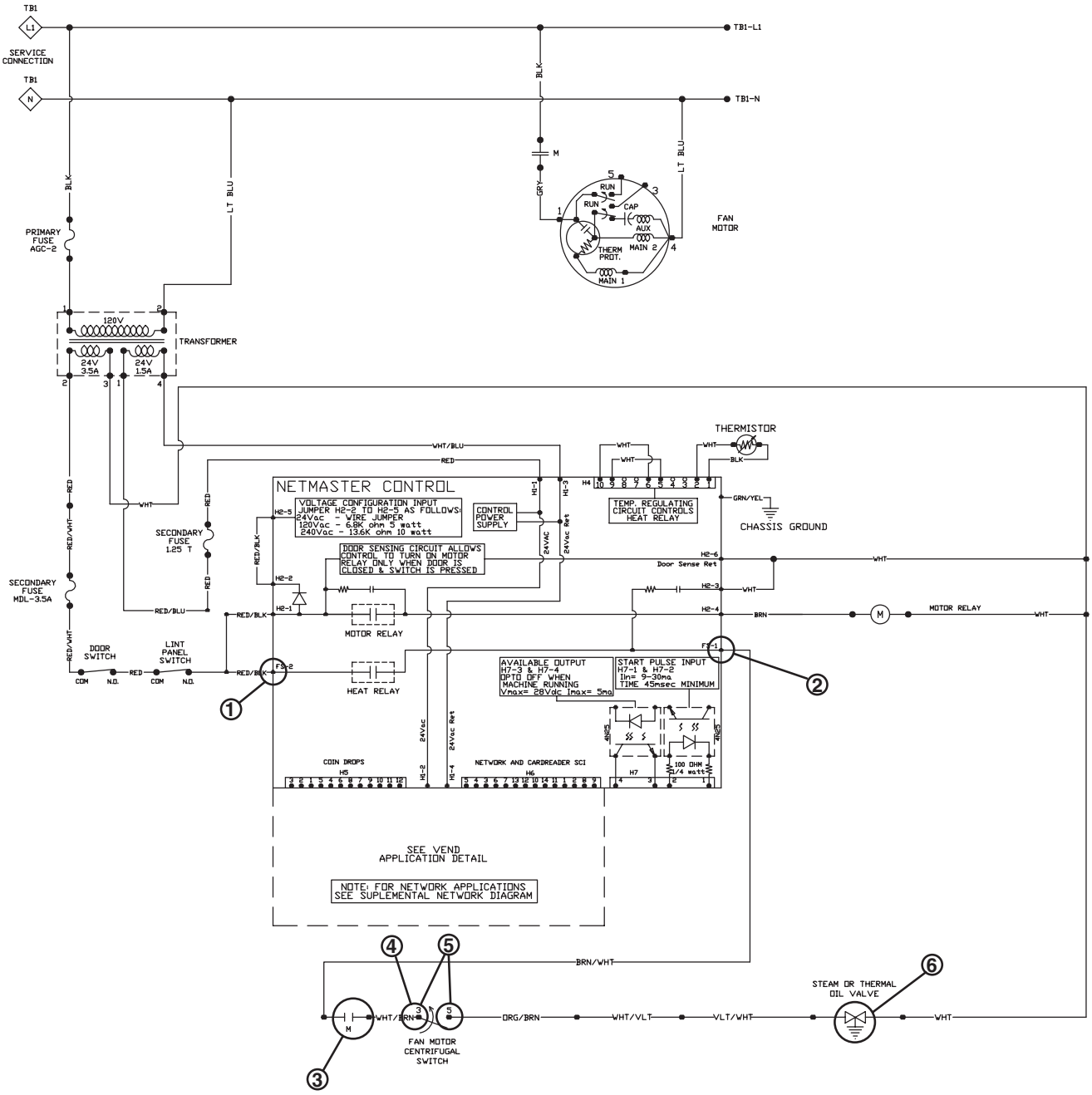
Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



TMB1803S

Unit Will Not Heat – Steam

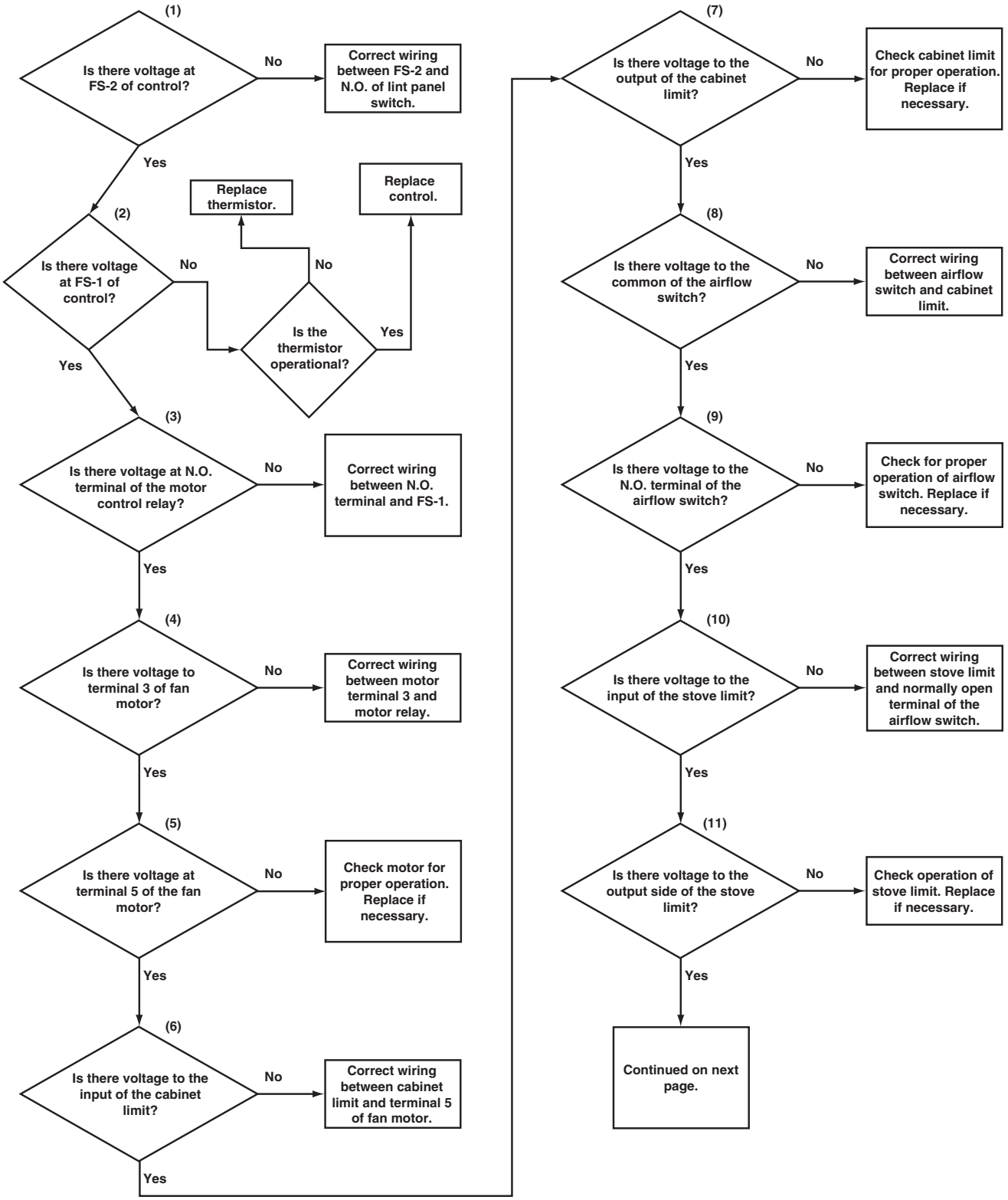


TMB1804S

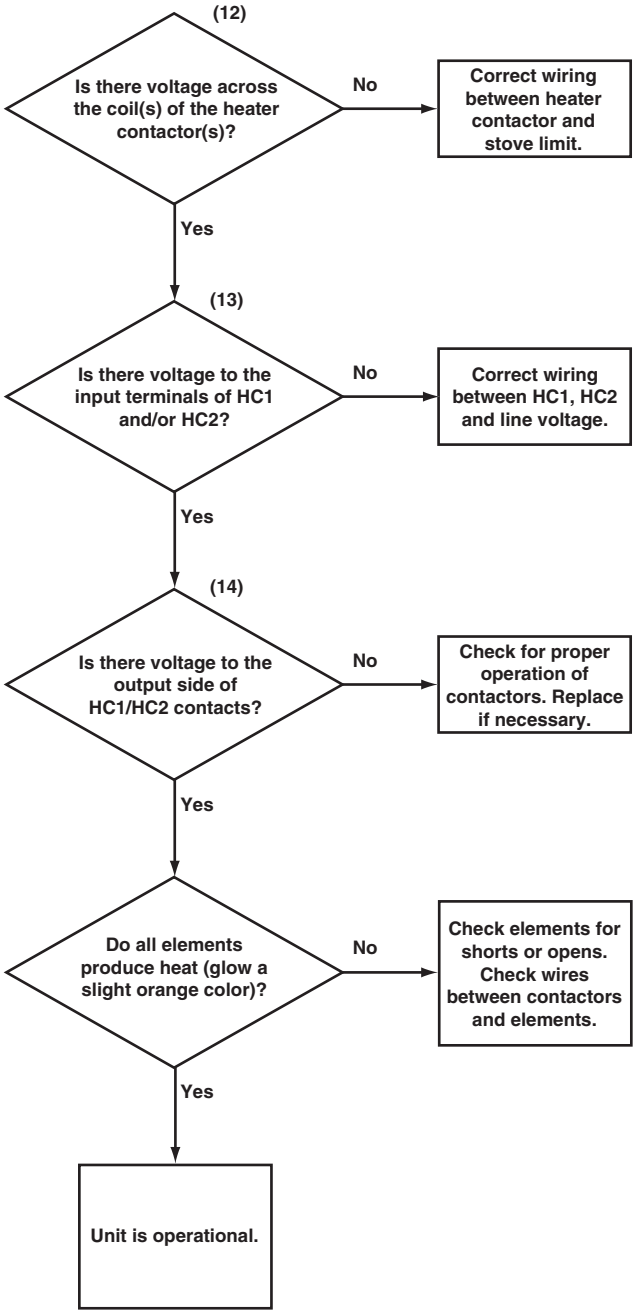
52. Unit Will Not Heat – Electric

Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



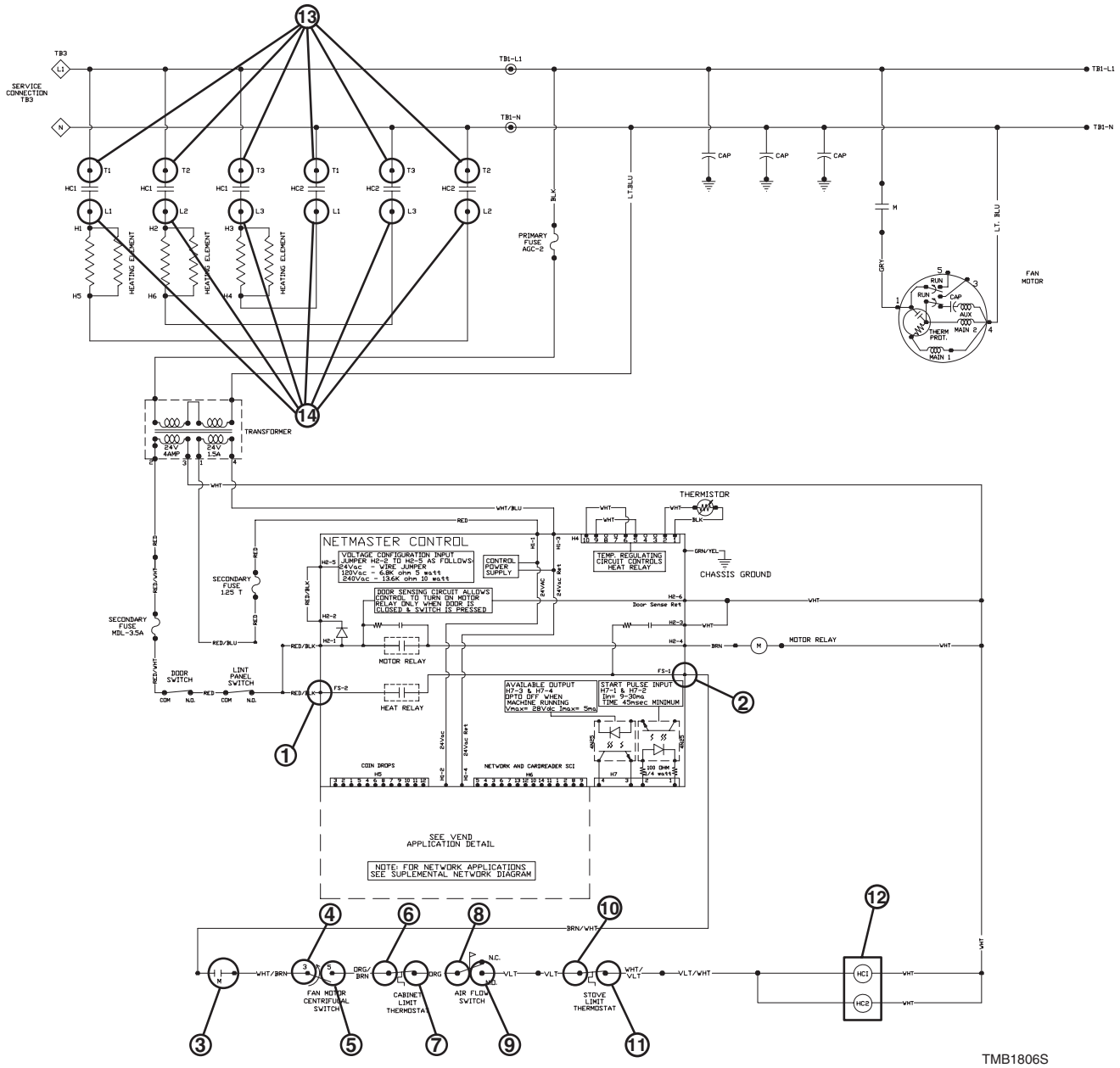
52. Unit Will Not Heat – Electric (continued)



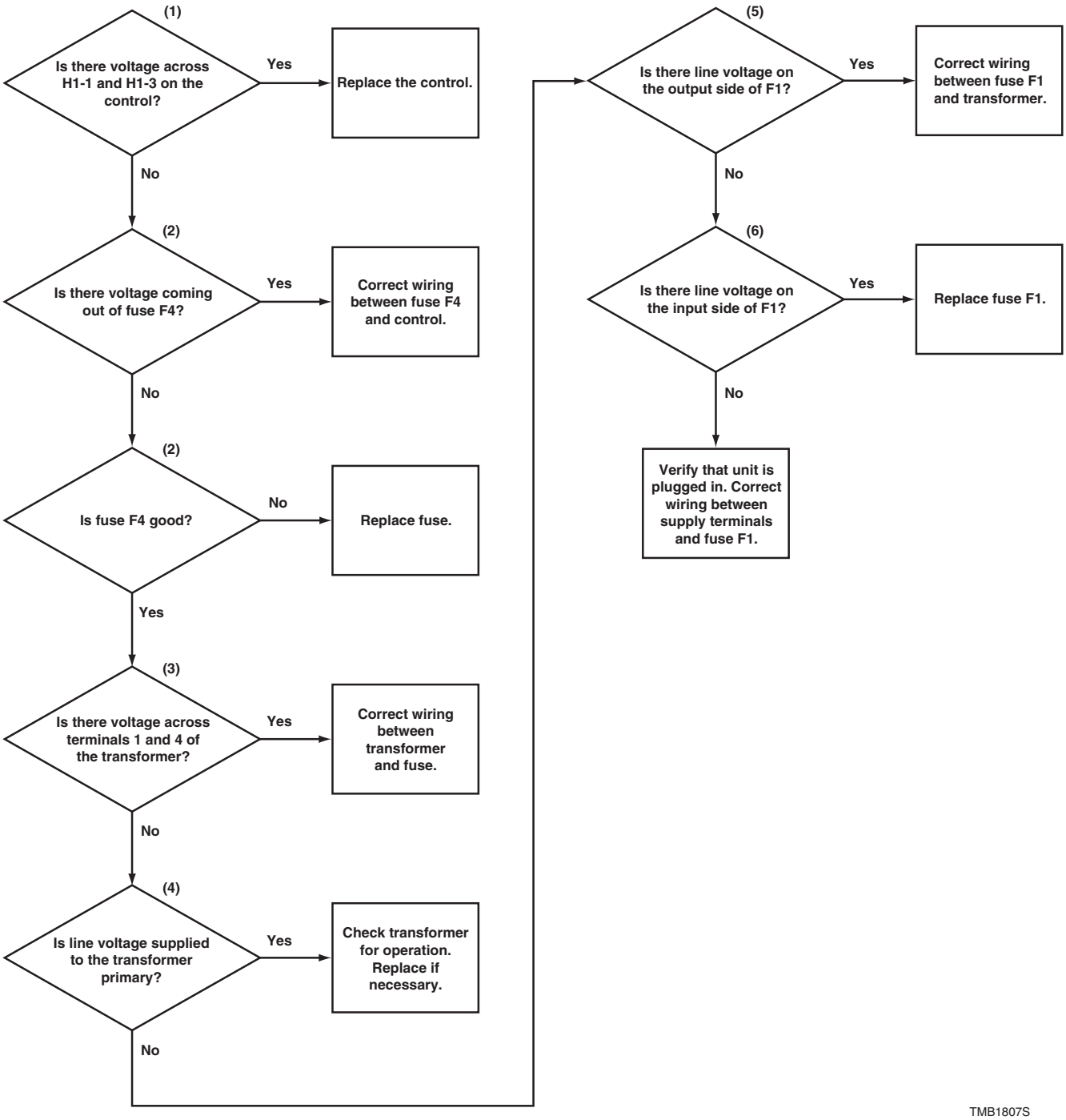
TMB1805S

Please see following page for wiring diagram information.

Unit Will Not Heat – Electric

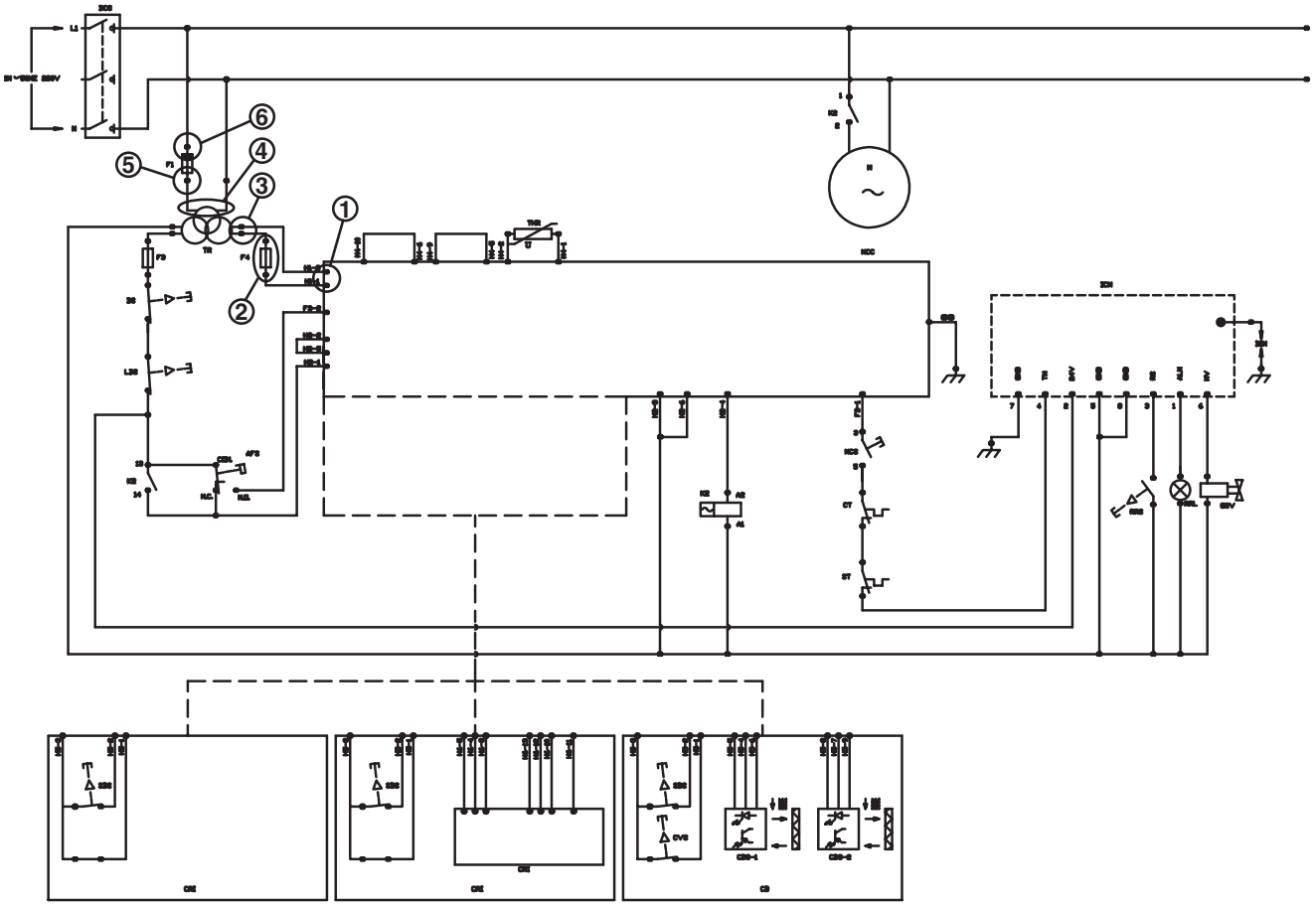


53. CE Models No Display



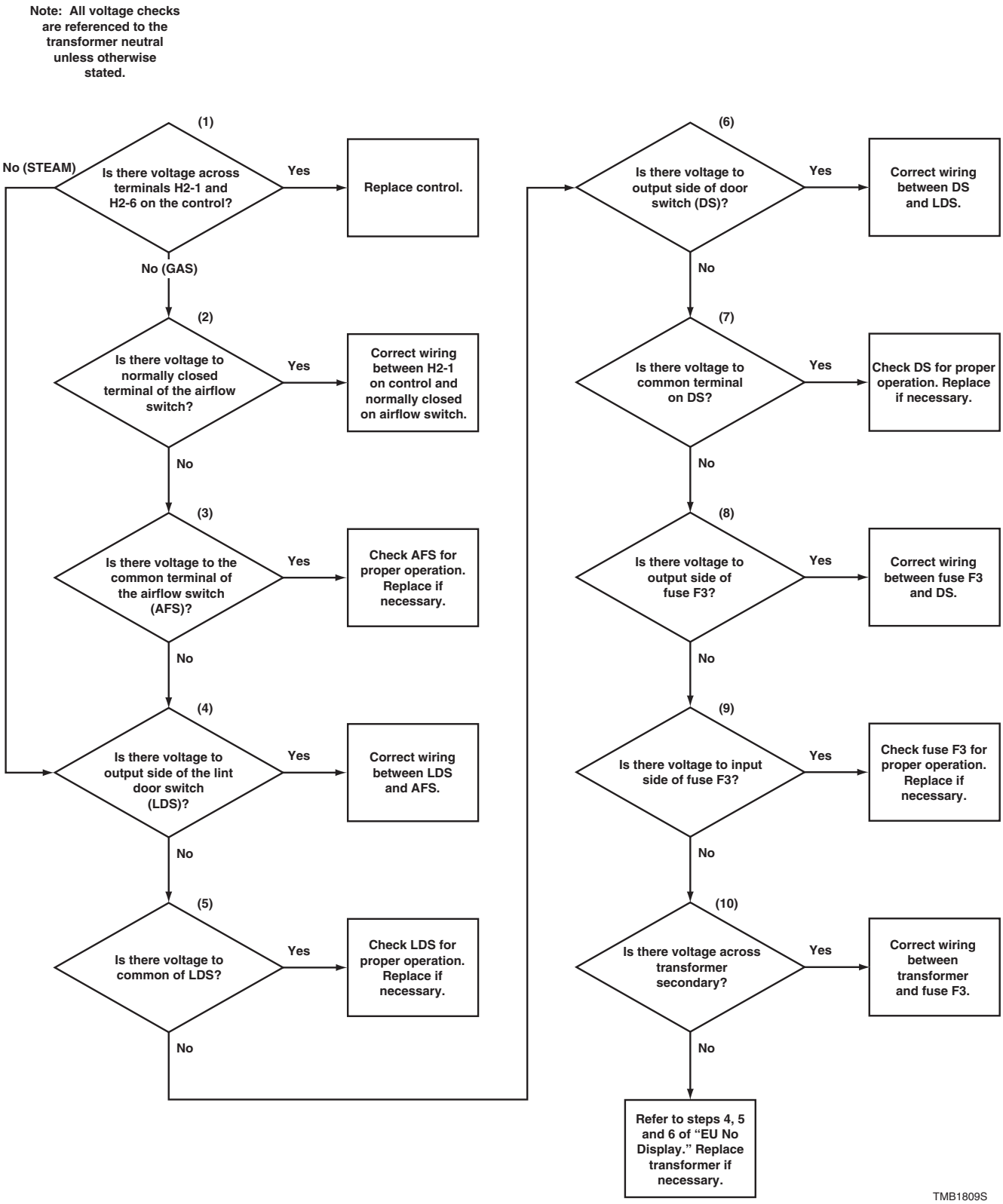
TMB1807S

CE Models No Display

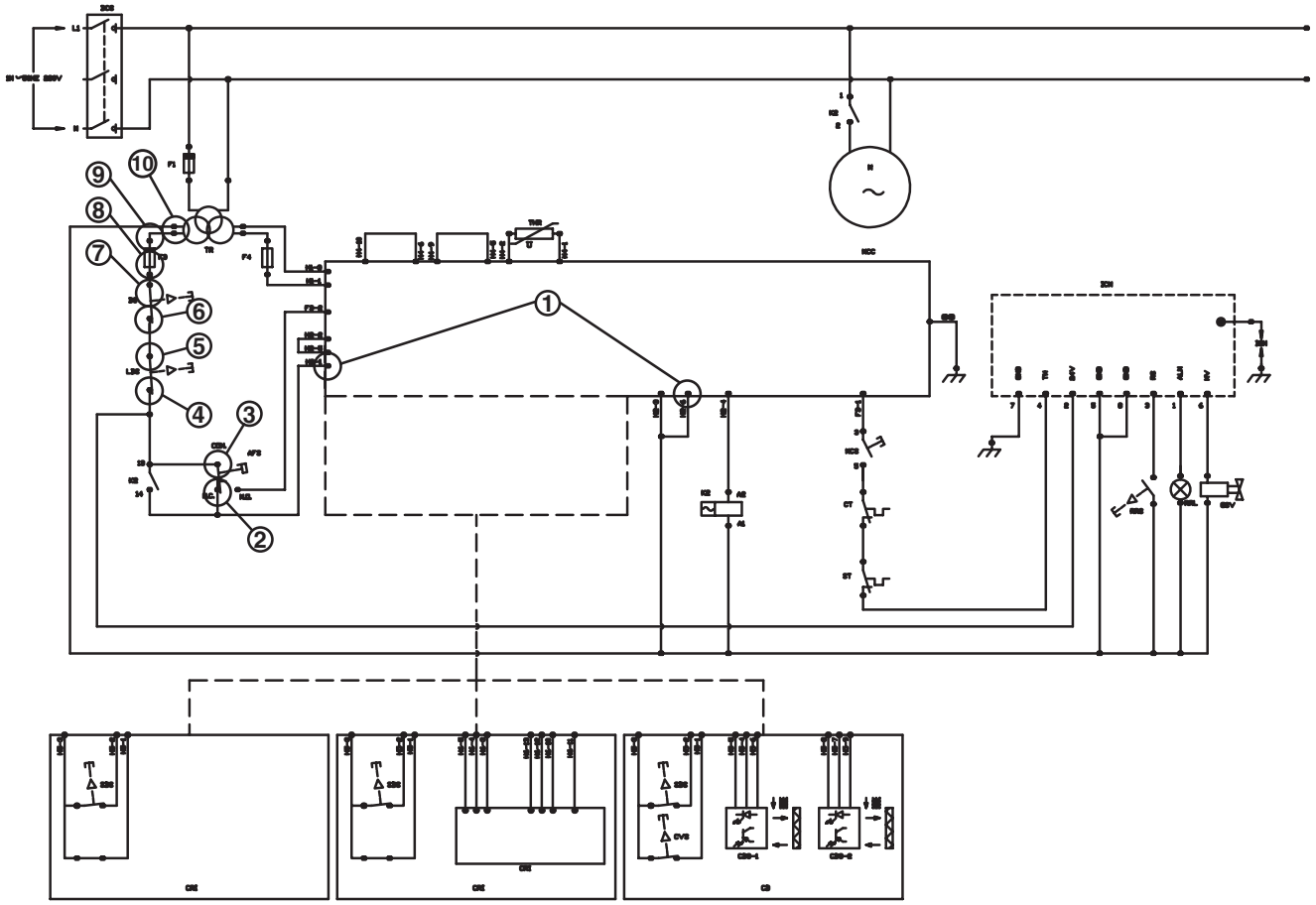


TMB1808S

54. CE Models “Door Open” Indicator

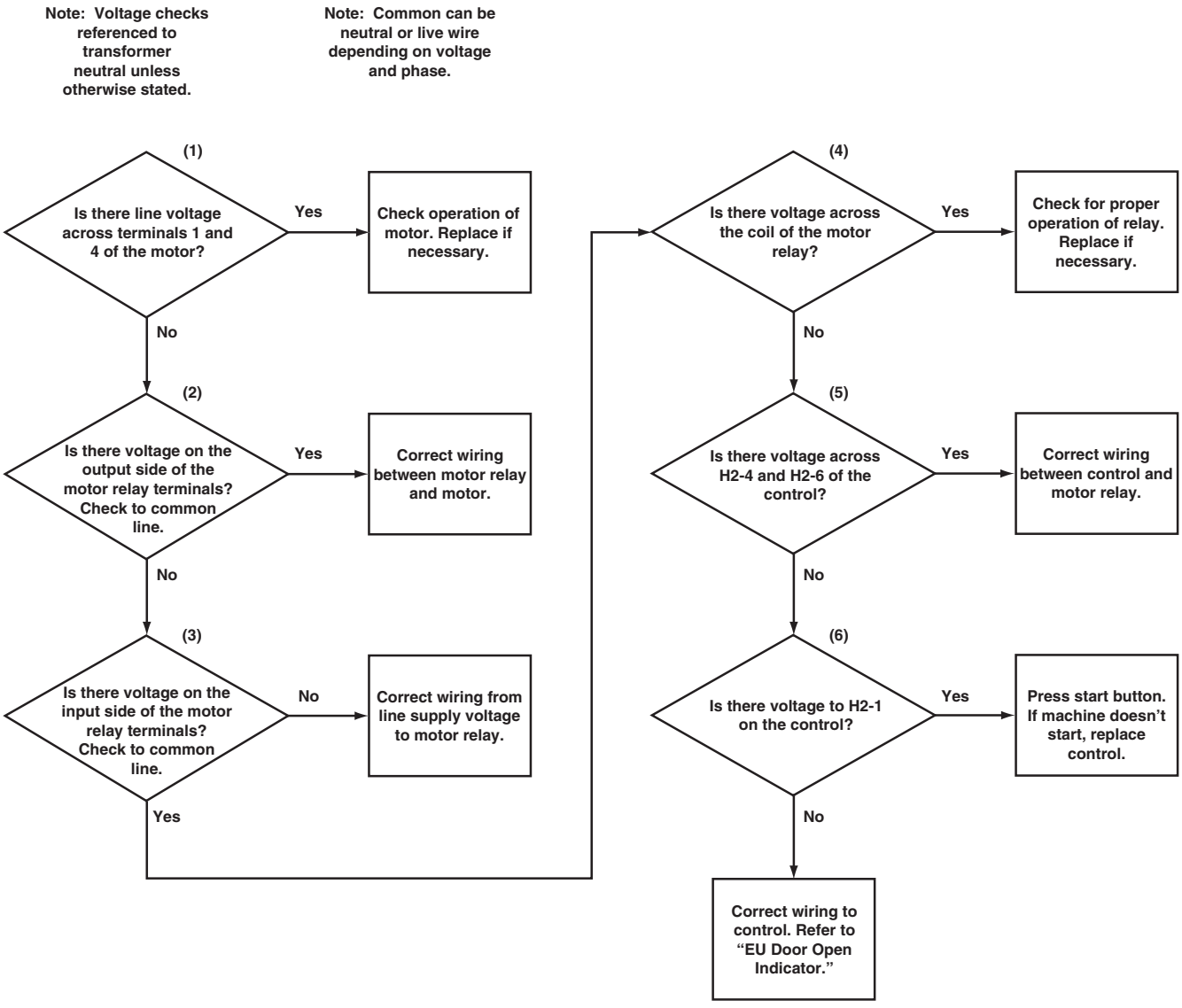


CE Models “Door Open” Indicator



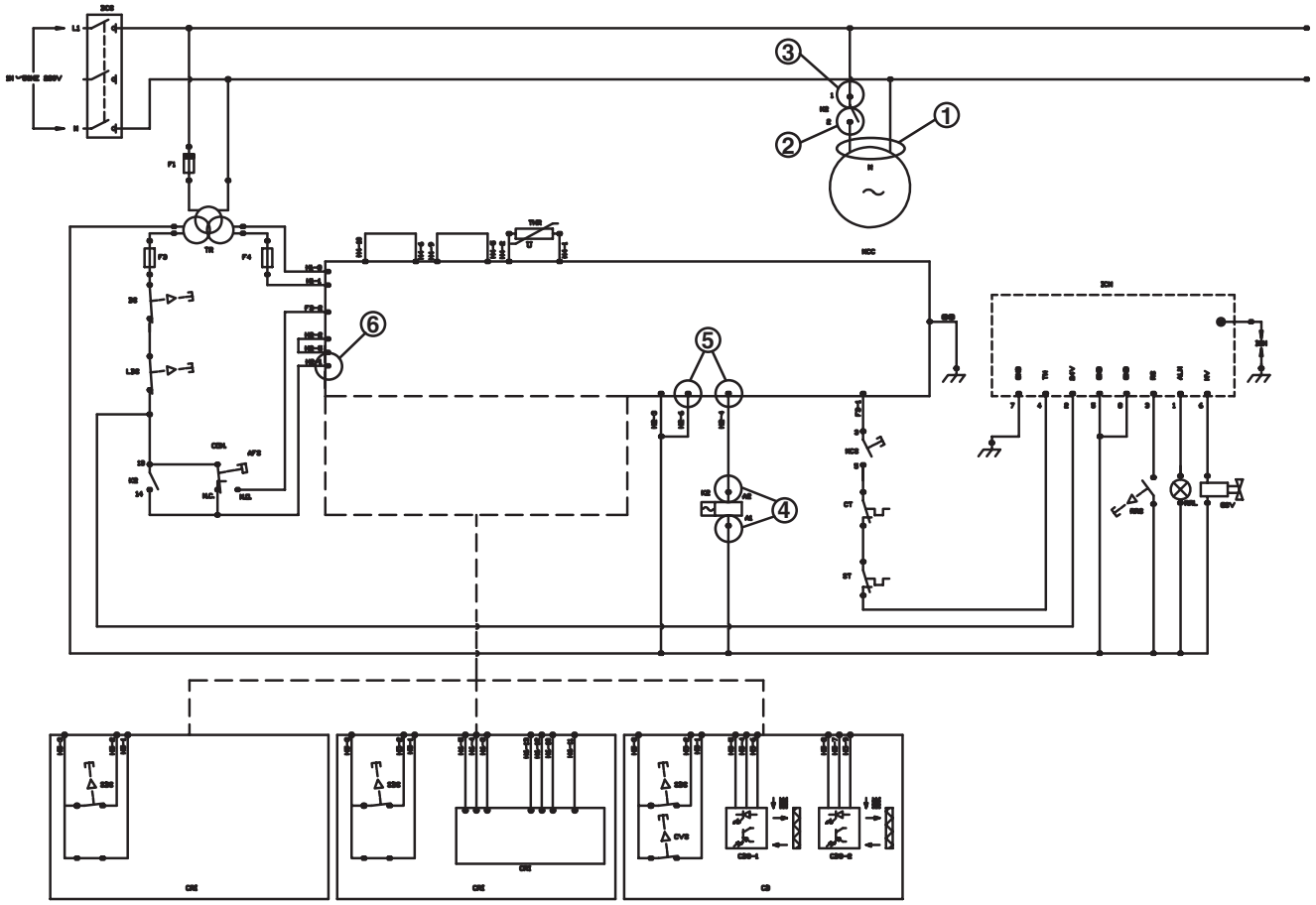
TMB1810S

55. CE Models No Start/Run



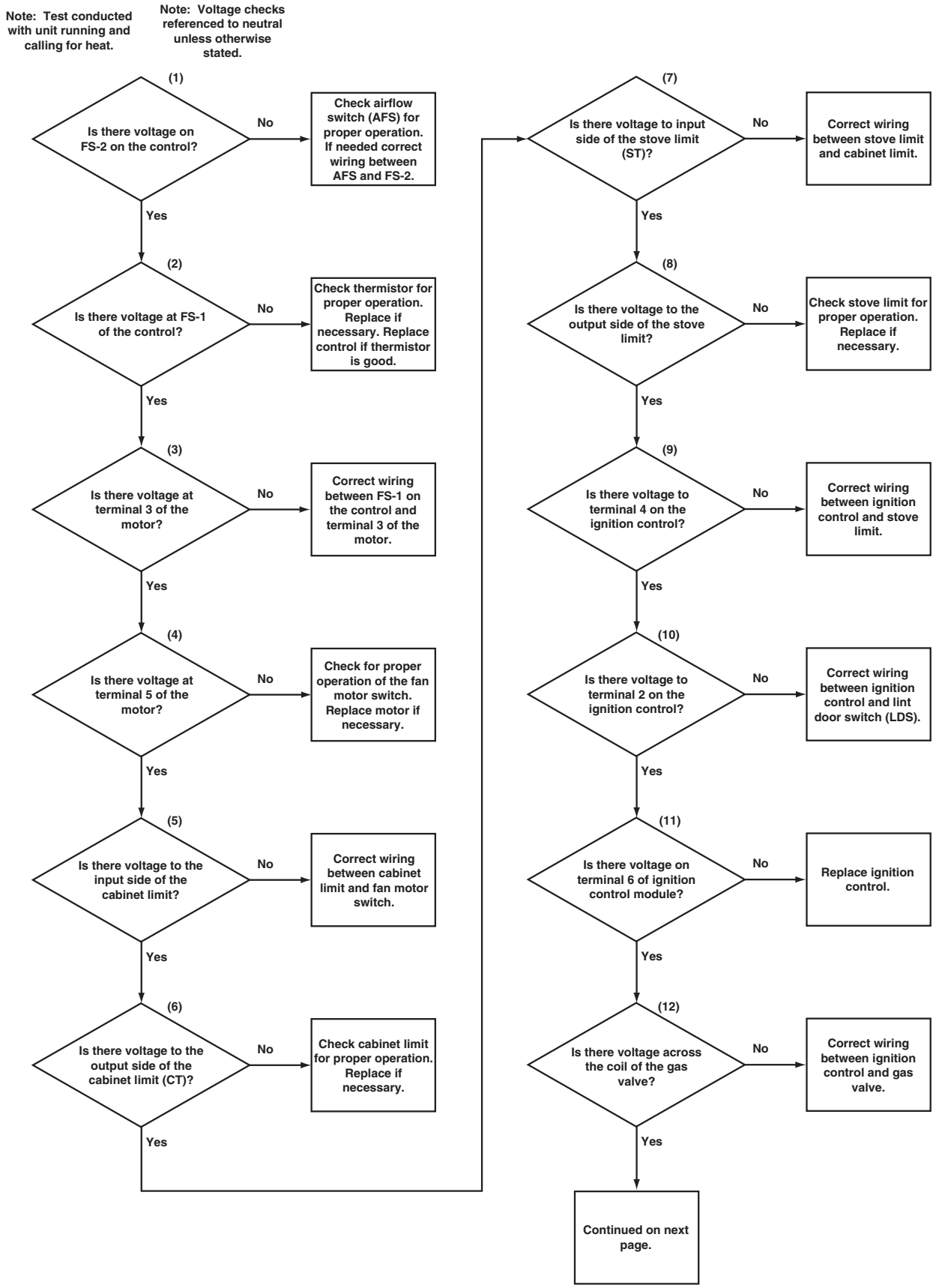
TMB1811S

CE Models No Start/Run

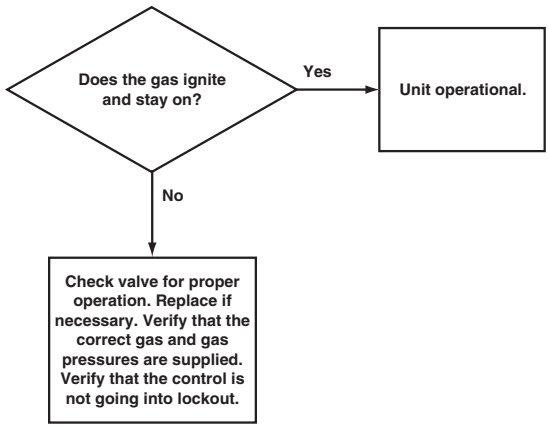


TMB1812S

56. CE Models Will Not Heat – Gas



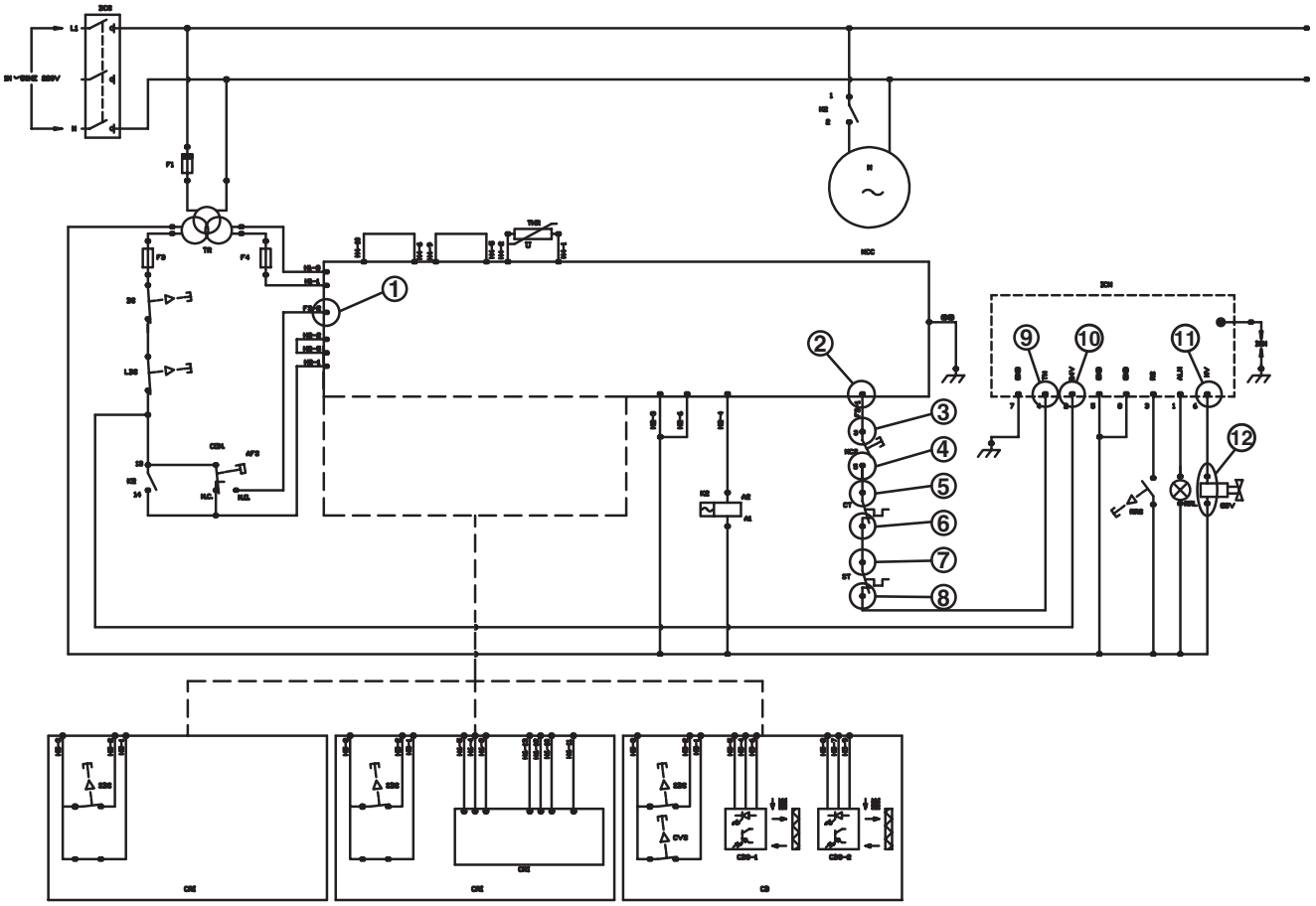
56. CE Models Will Not Heat – Gas (continued)



TMB1813S

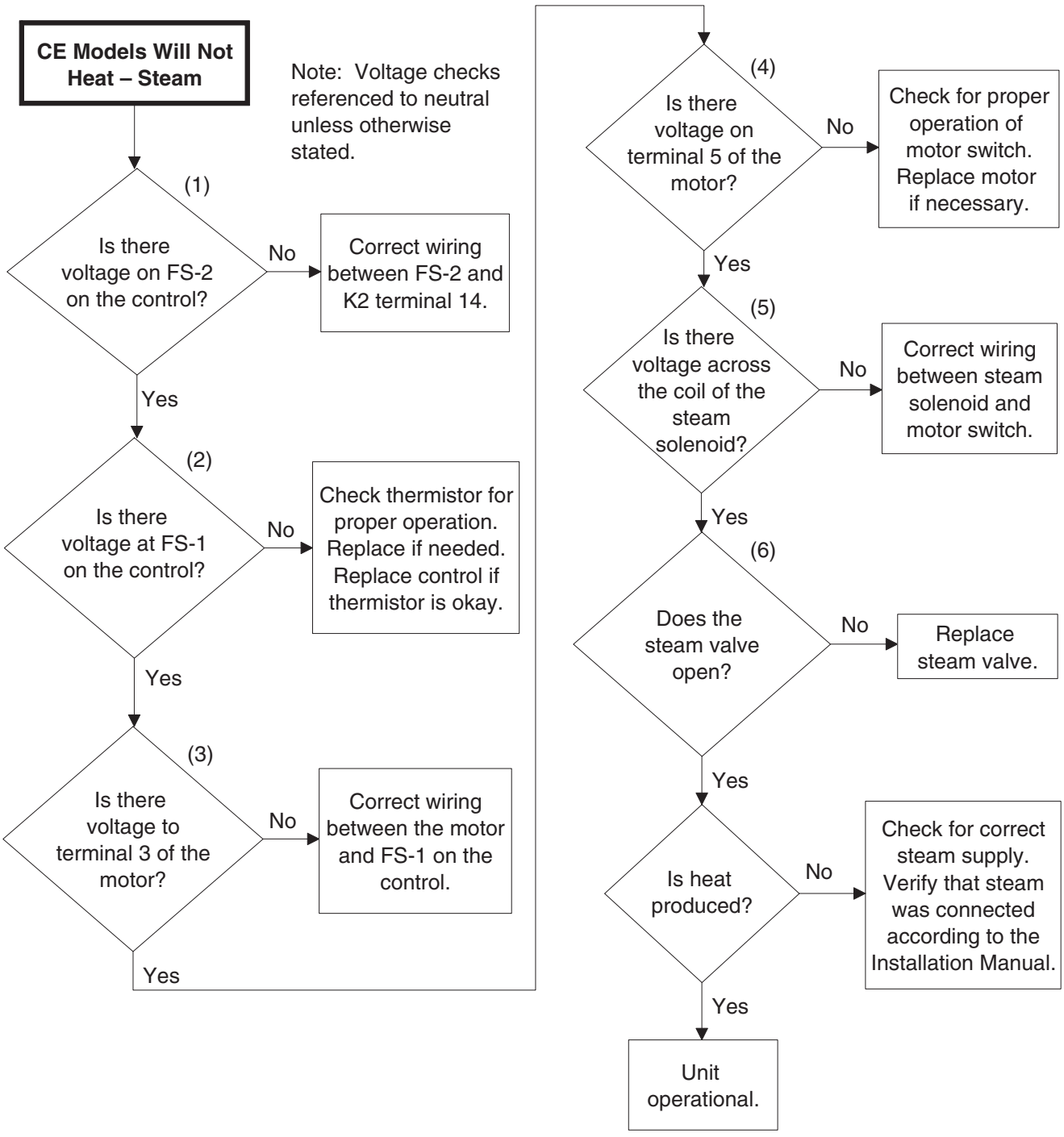
Please see following page for wiring diagram information.

CE Models Will Not Heat – Gas



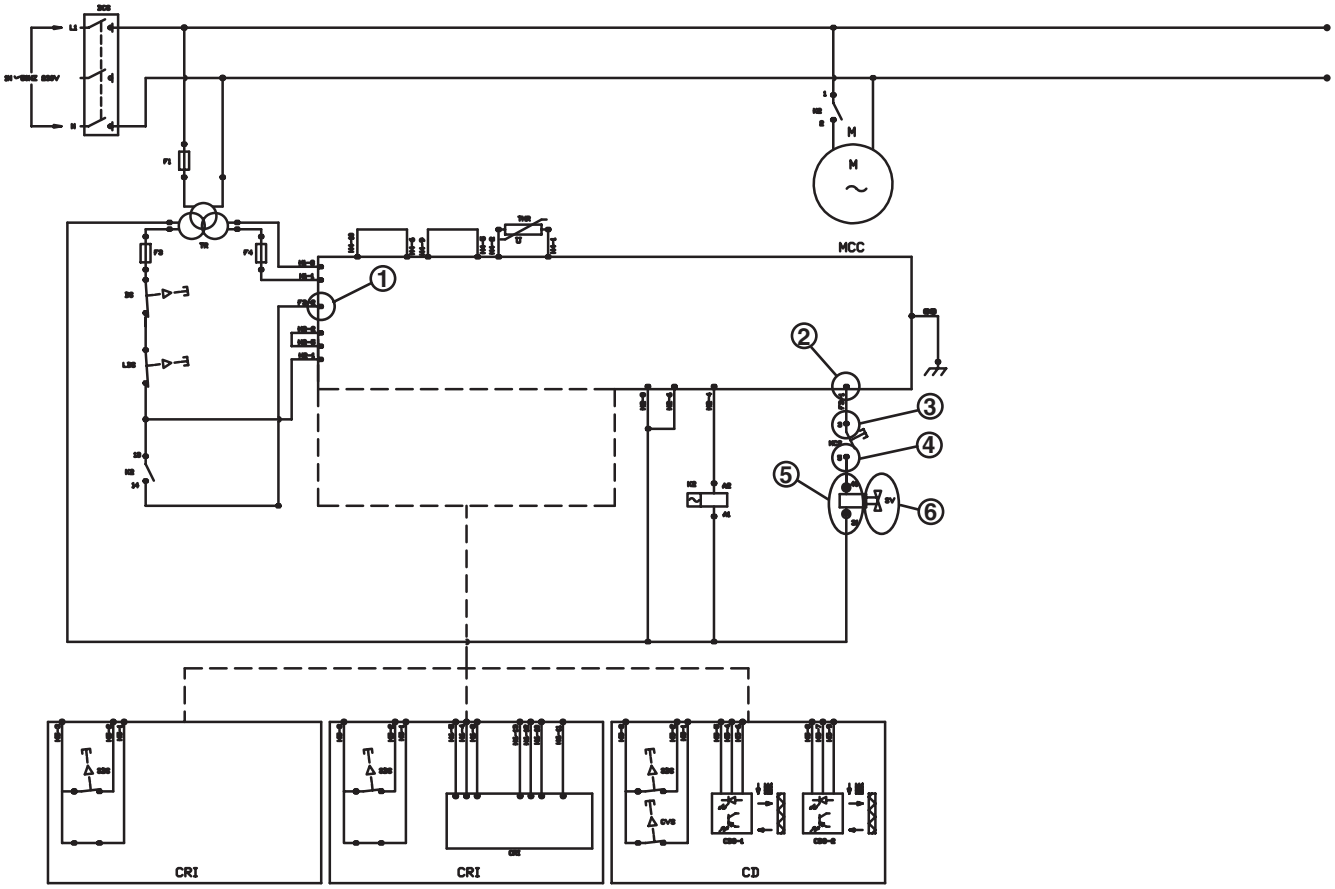
TMB1814S

57. CE Models Will Not Heat – Steam



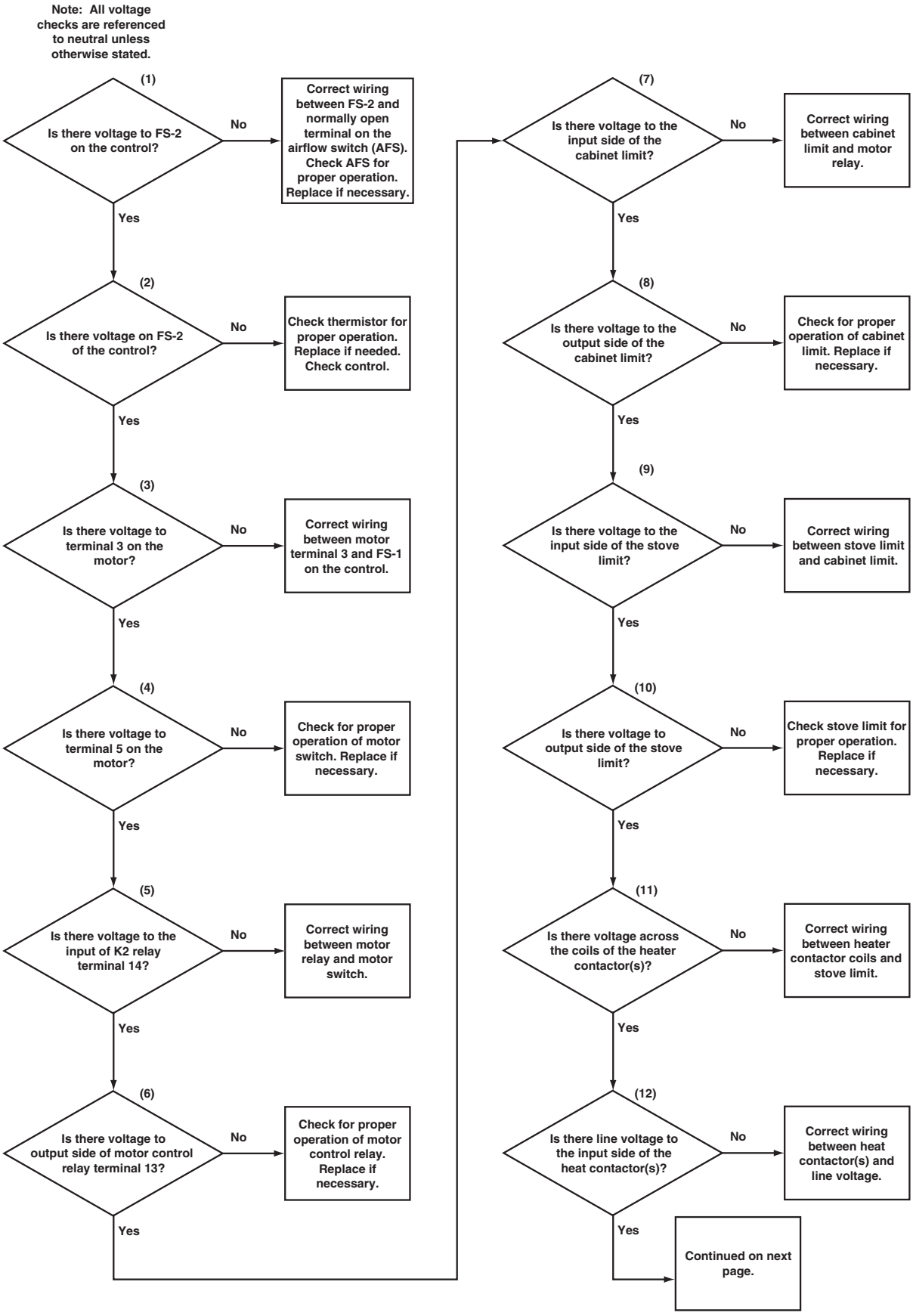
TMB2250S

CE Models Will Not Heat – Steam

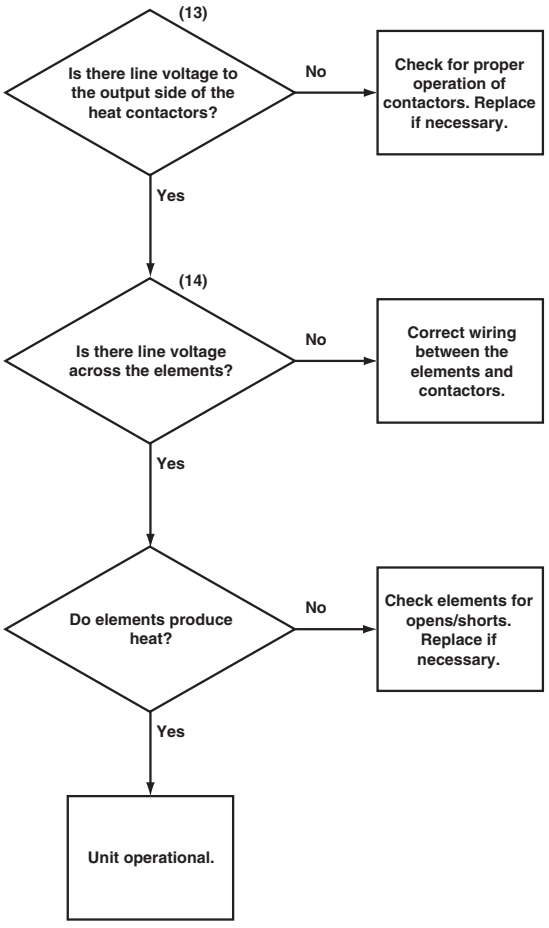


TMB2263S

58. CE Models Will Not Heat – Electric

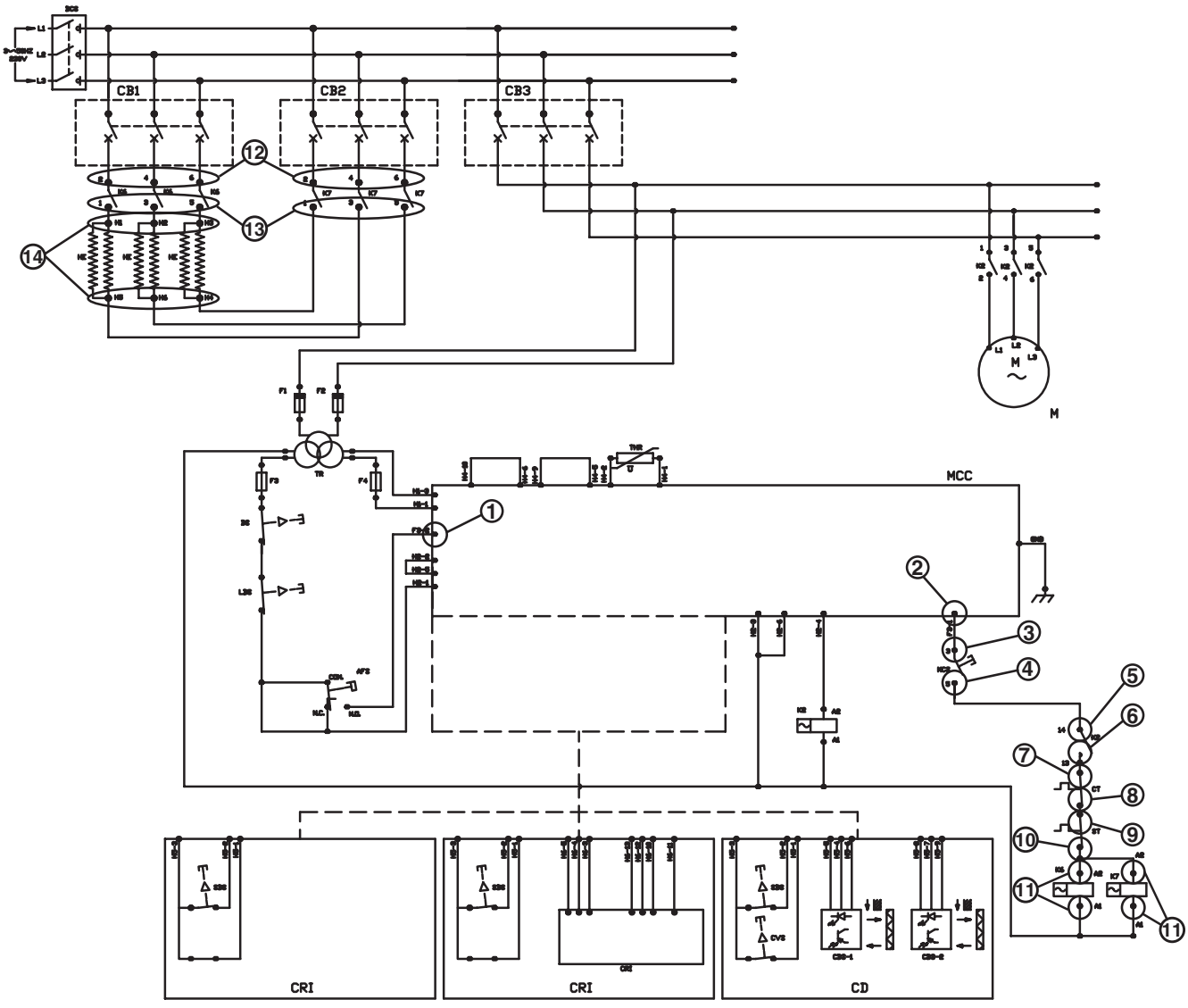


58. CE Models Will Not Heat – Electric (continued)



TMB1817S

CE Models Will Not Heat – Electric



TMB1818S

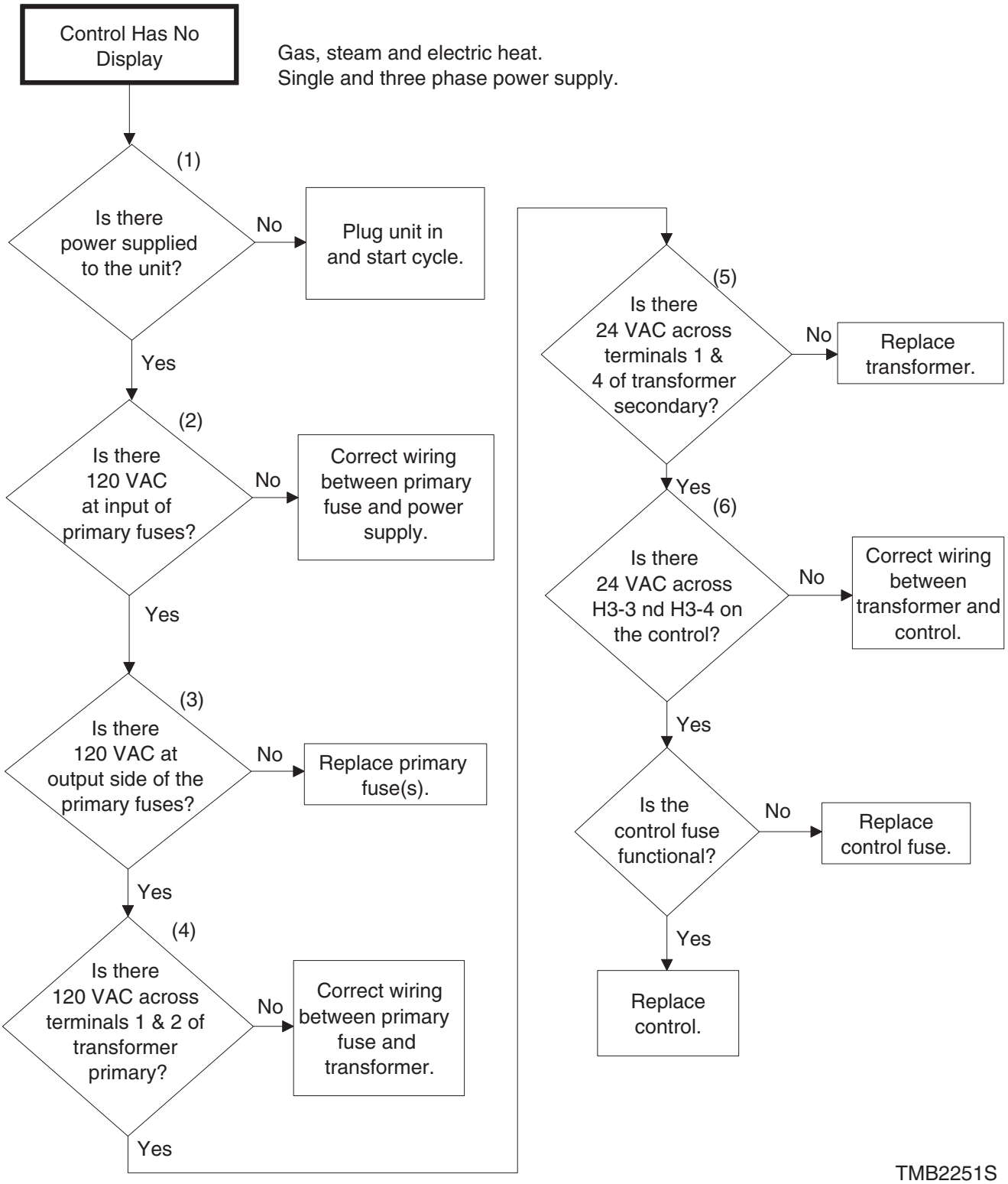
Section 7
On Premise Micro Control (OM) Troubleshooting

WARNING

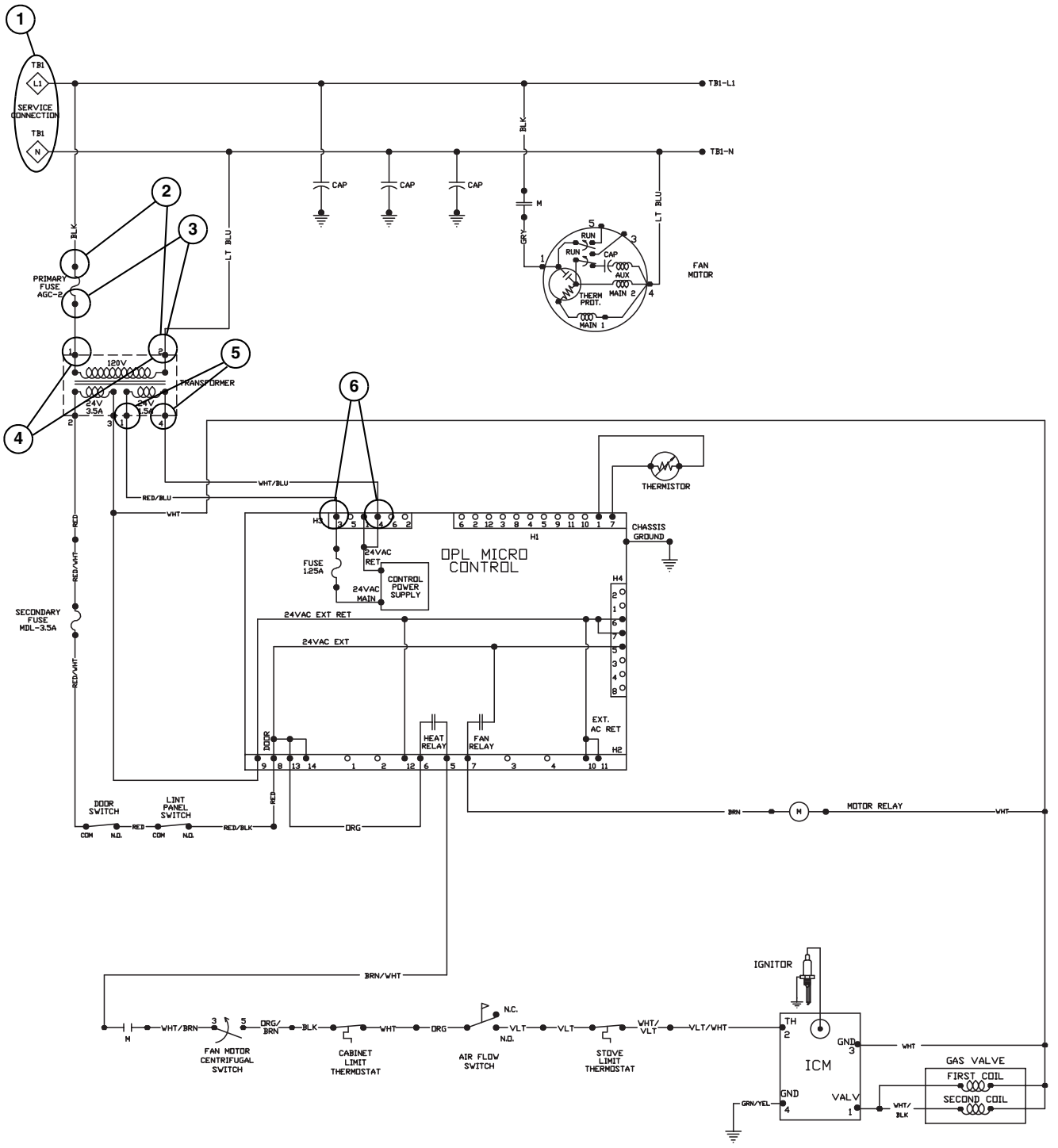
To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

59. Control Has No Display

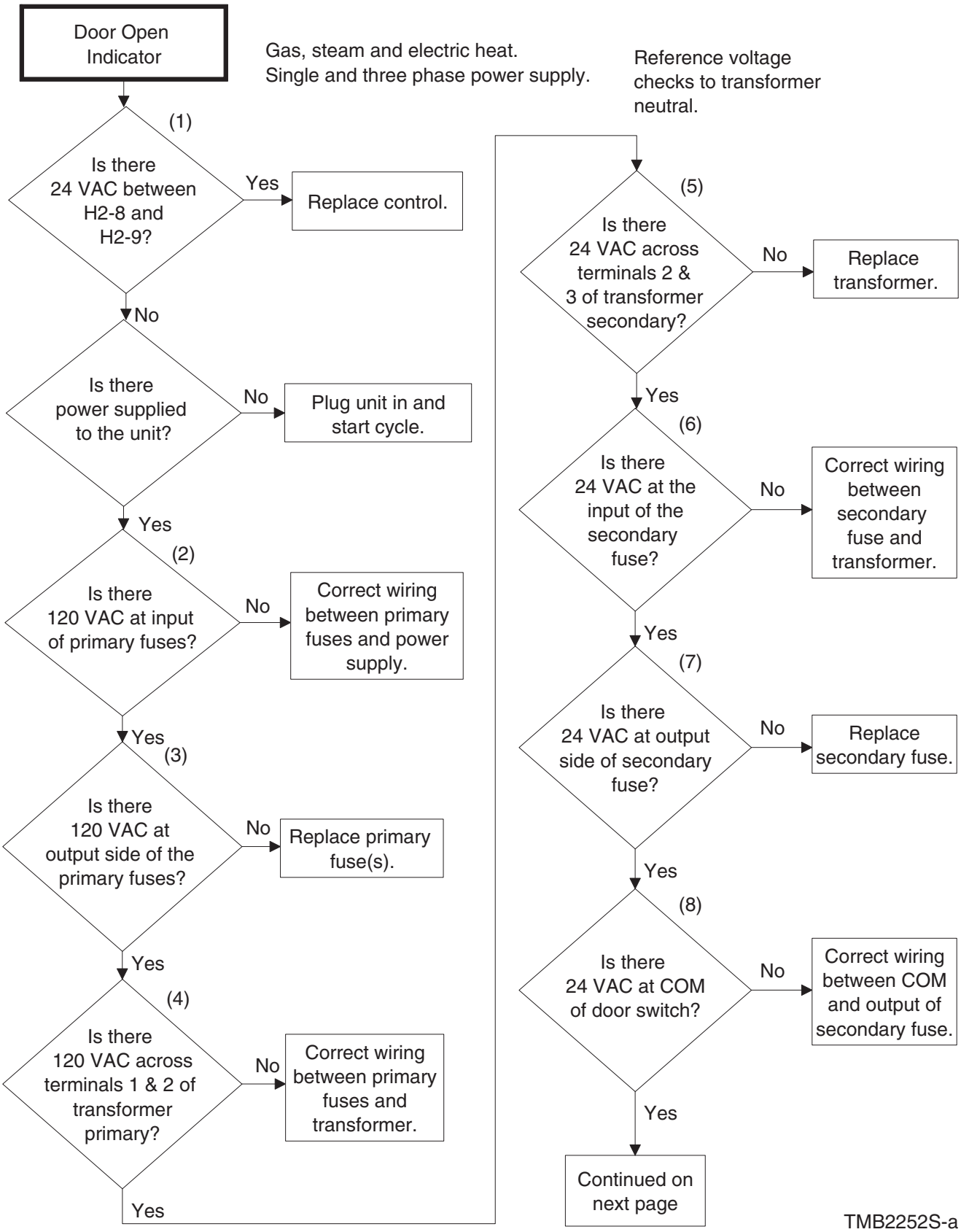


Control Has No Display

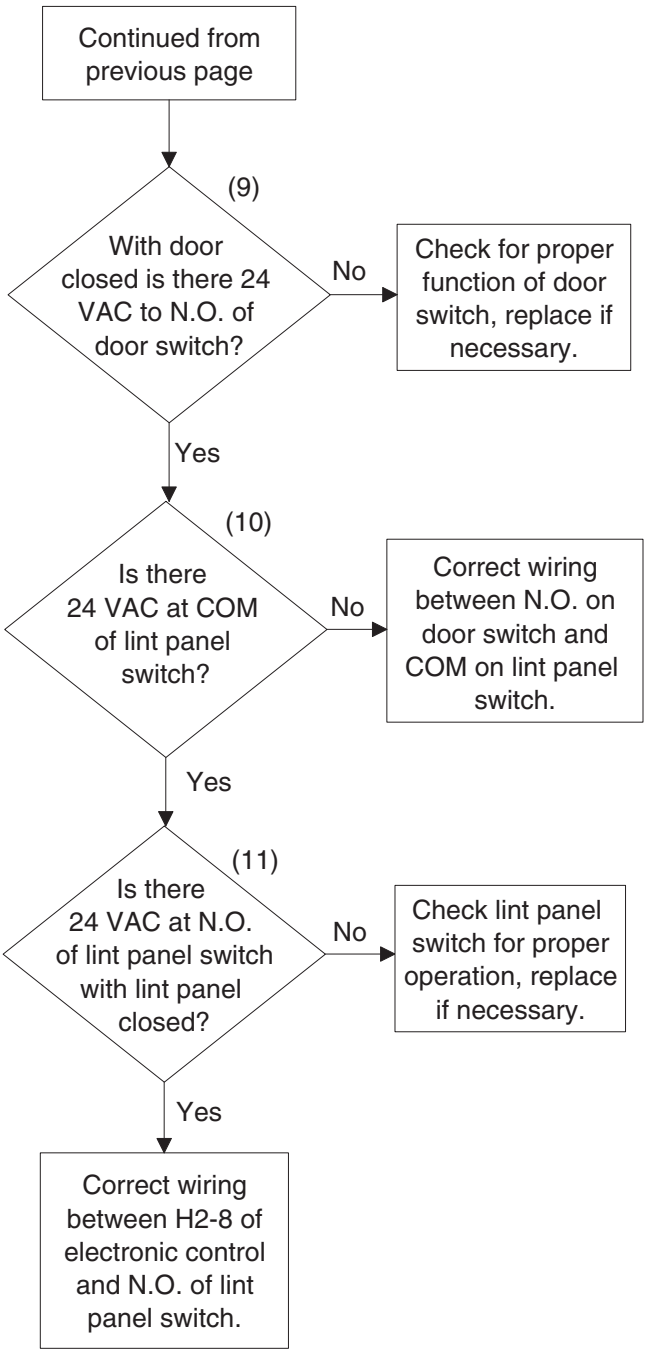


TMB2242S

60. Door Open Indicator



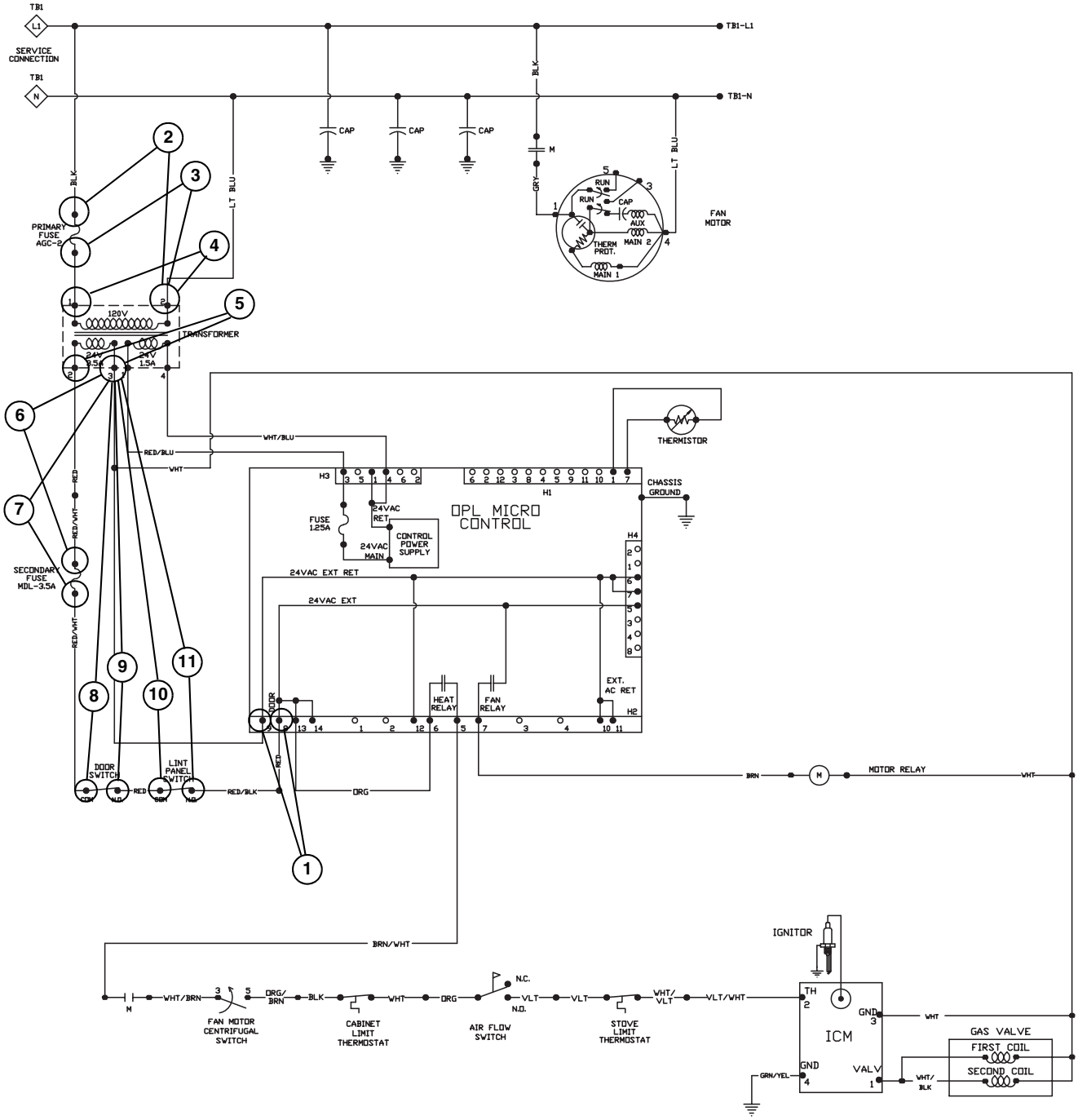
60. Door Open Indicator (continued)



TMB2252S-b

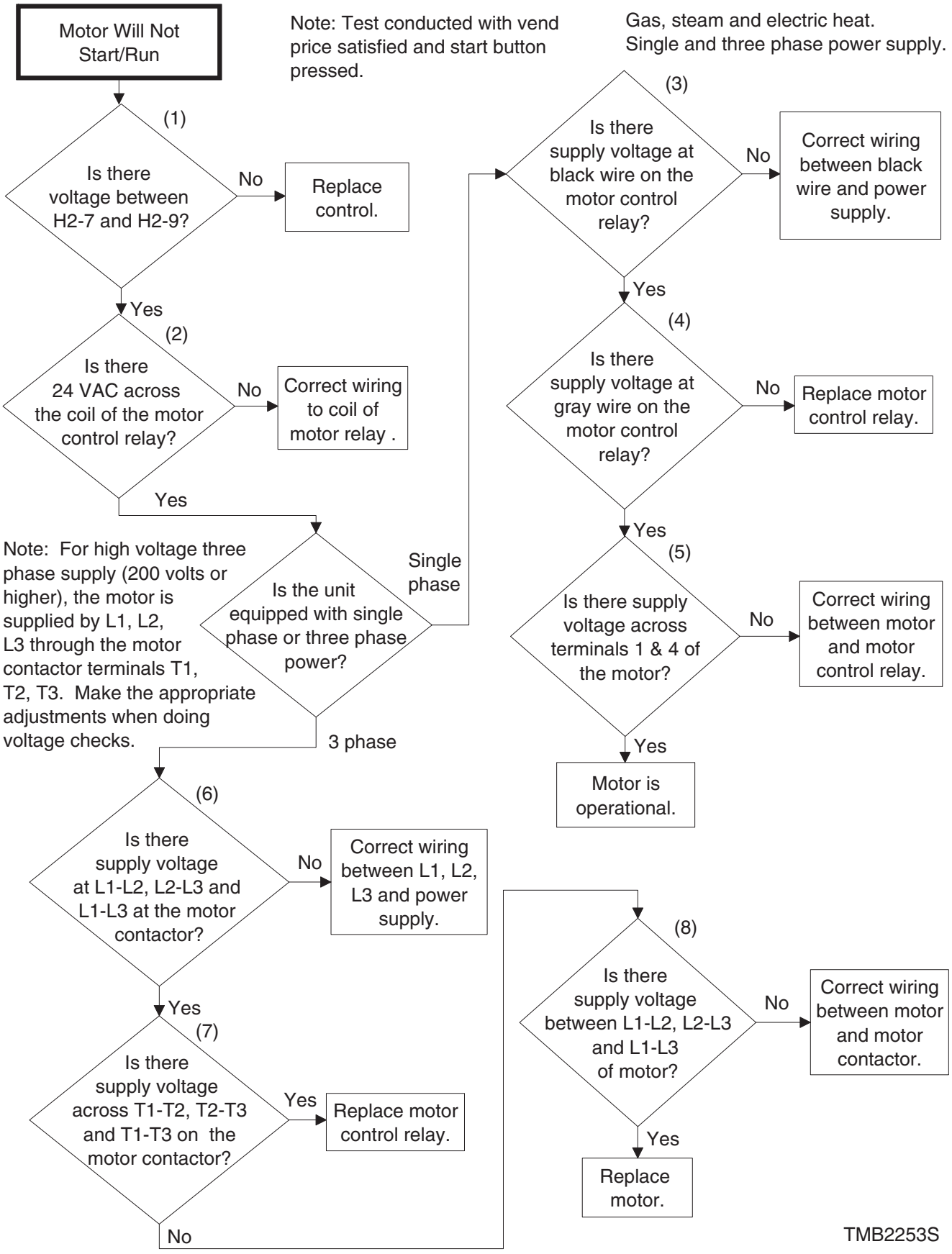
Please see following page for wiring diagram information.

Door Open Indicator

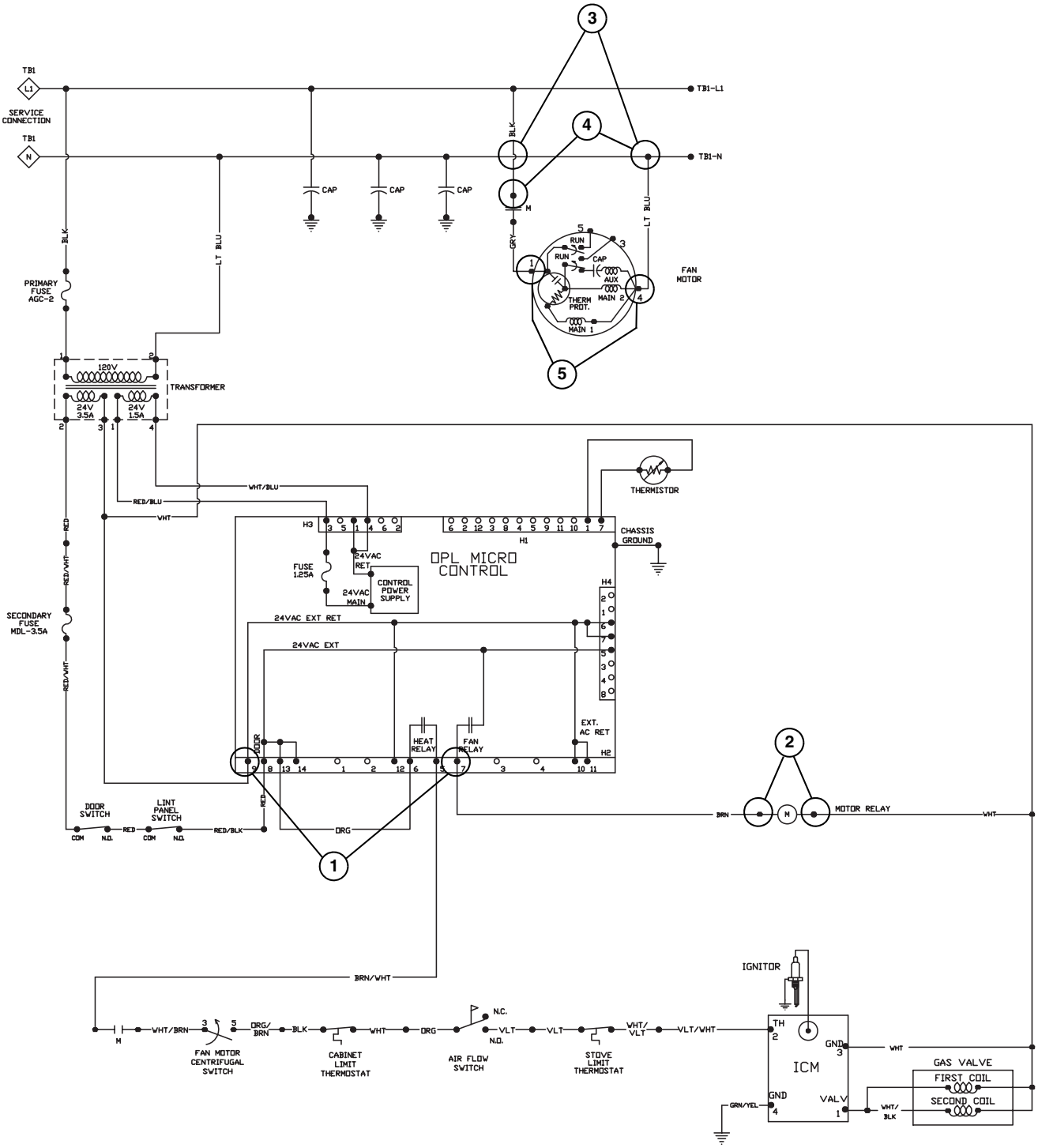


TMB2242S

61. Motor Will Not Start/Run

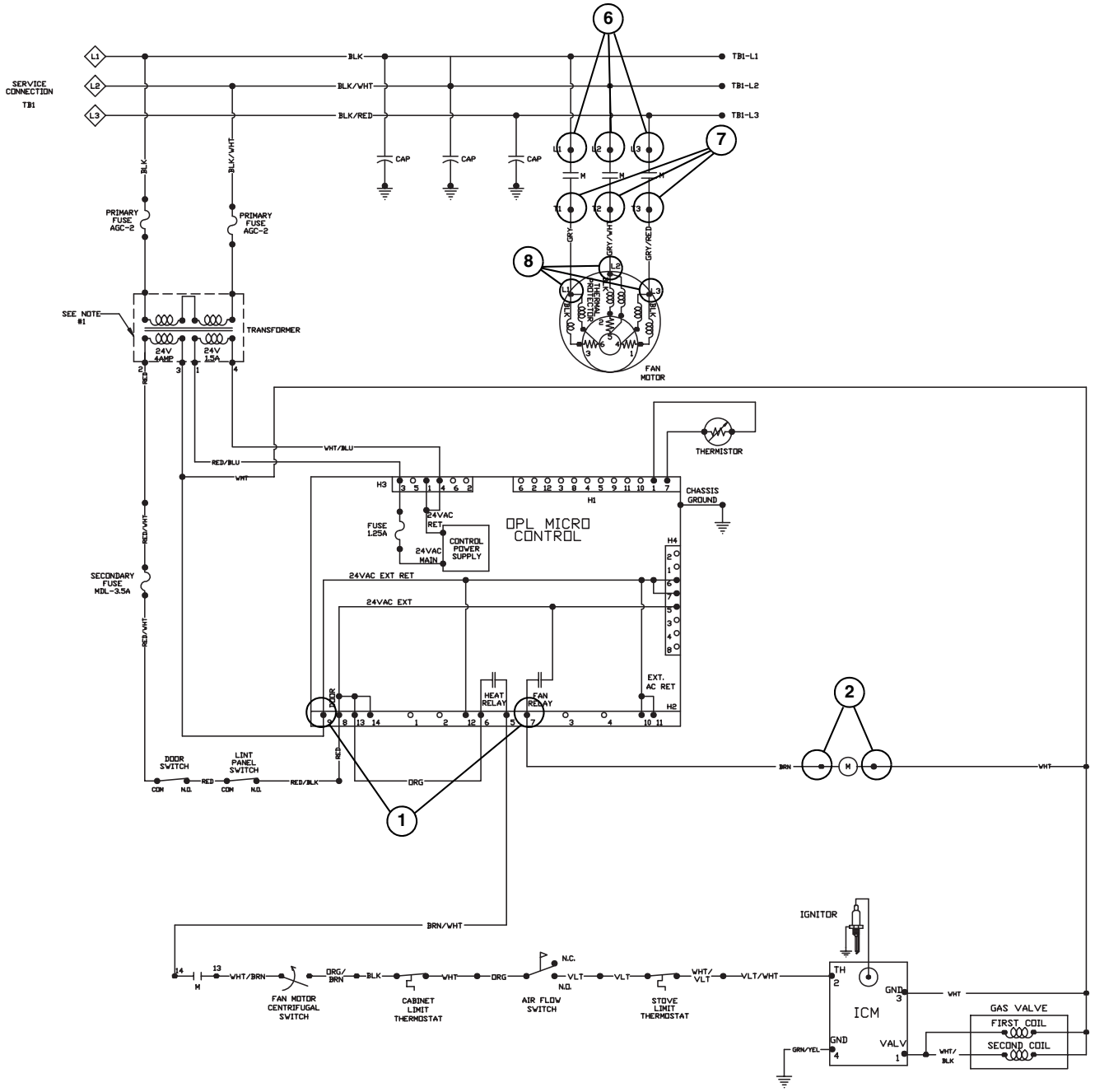


Motor Will Not Start/Run – Single Phase



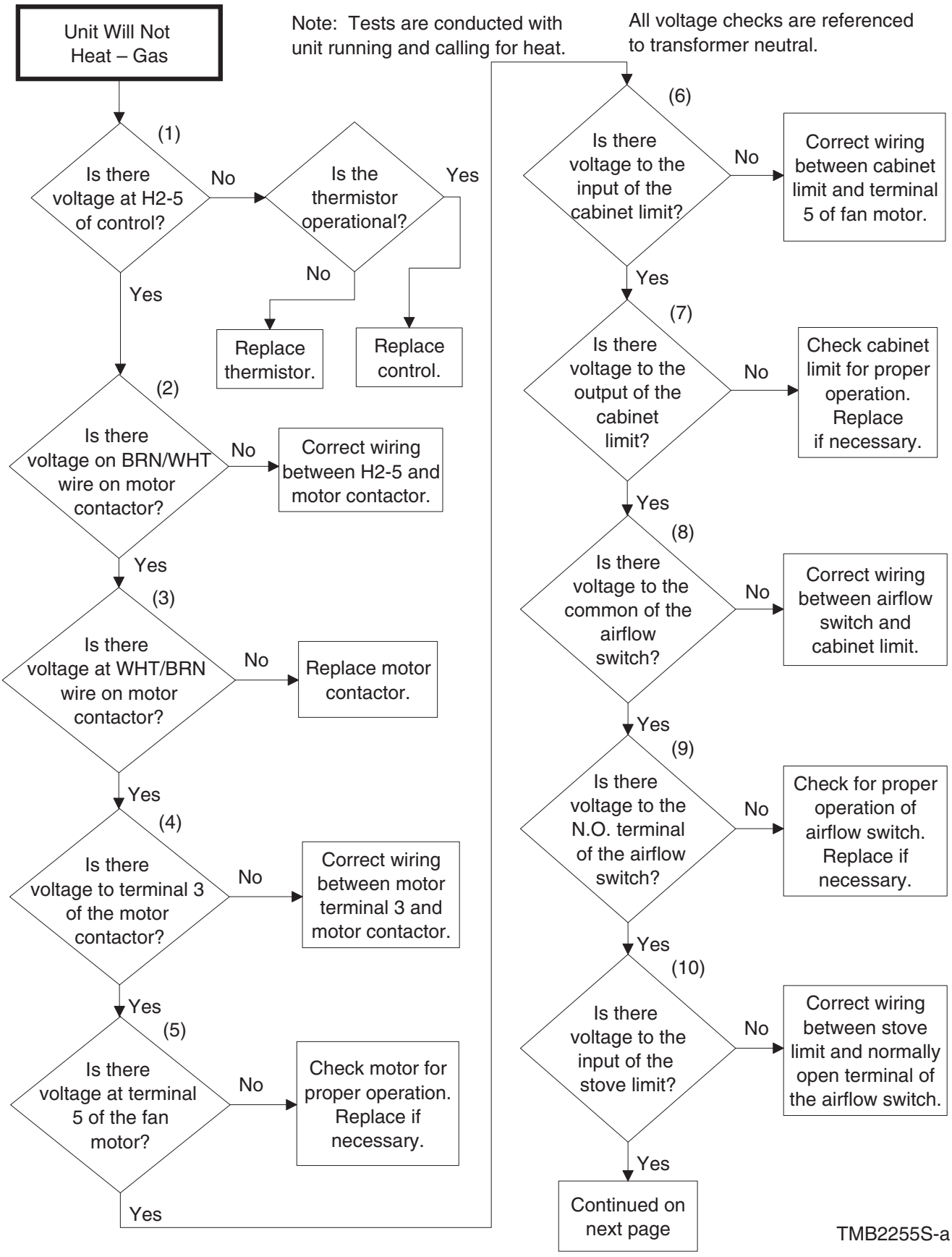
TMB2242S

Motor Will Not Start/Run – 3 Phase

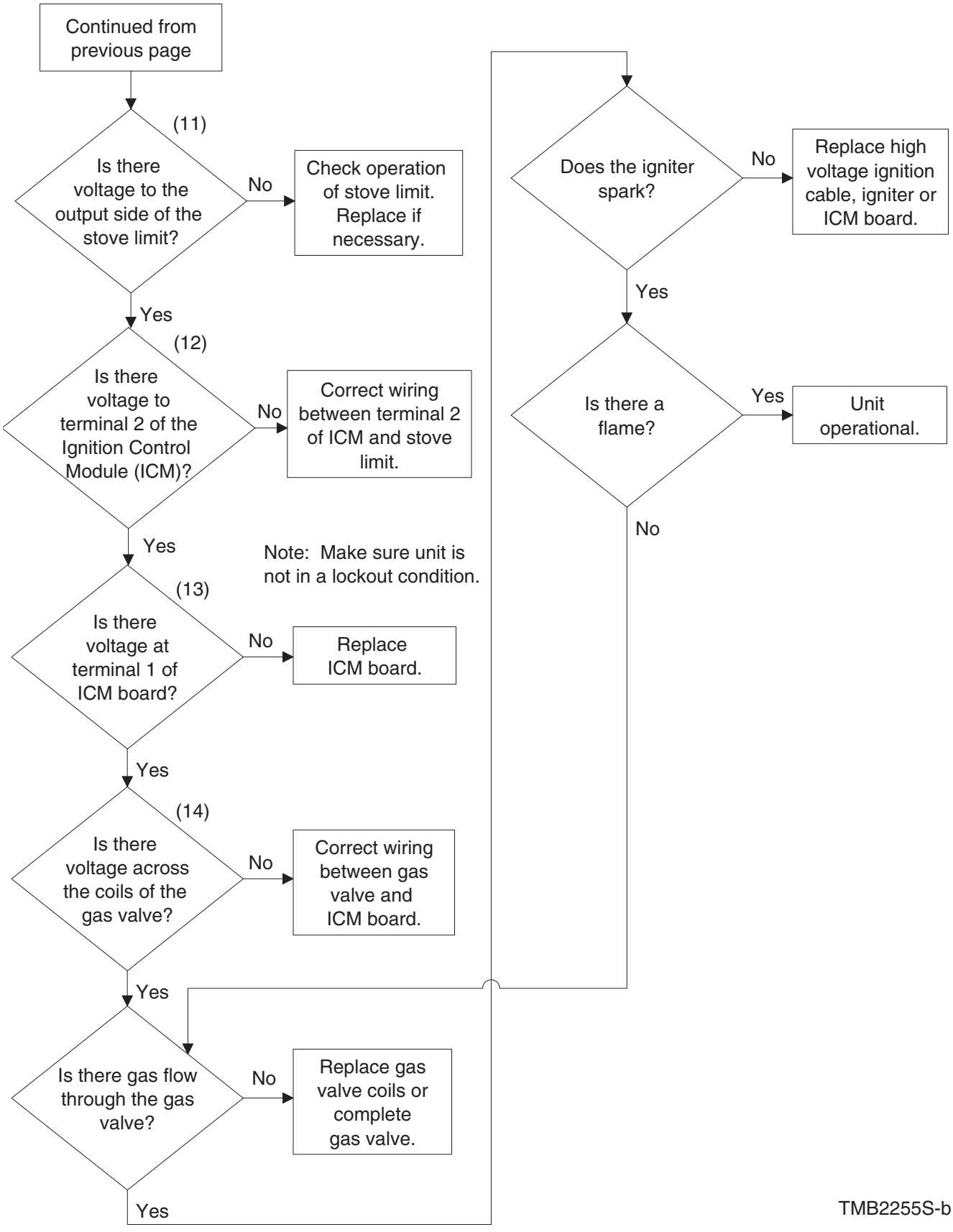


TMB2254S

62. Unit Will Not Heat – Gas

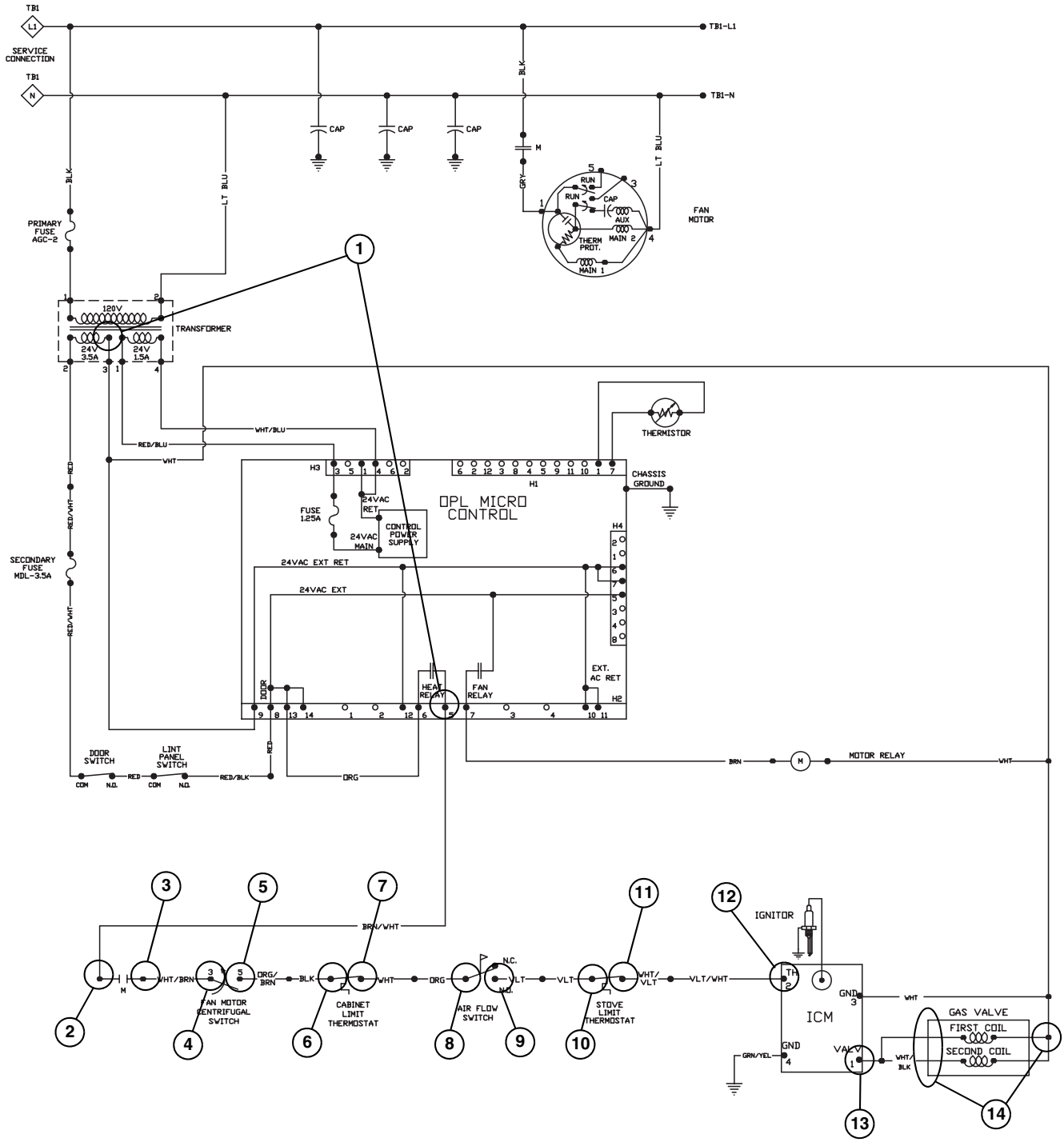


62. Unit Will Not Heat – Gas (continued)



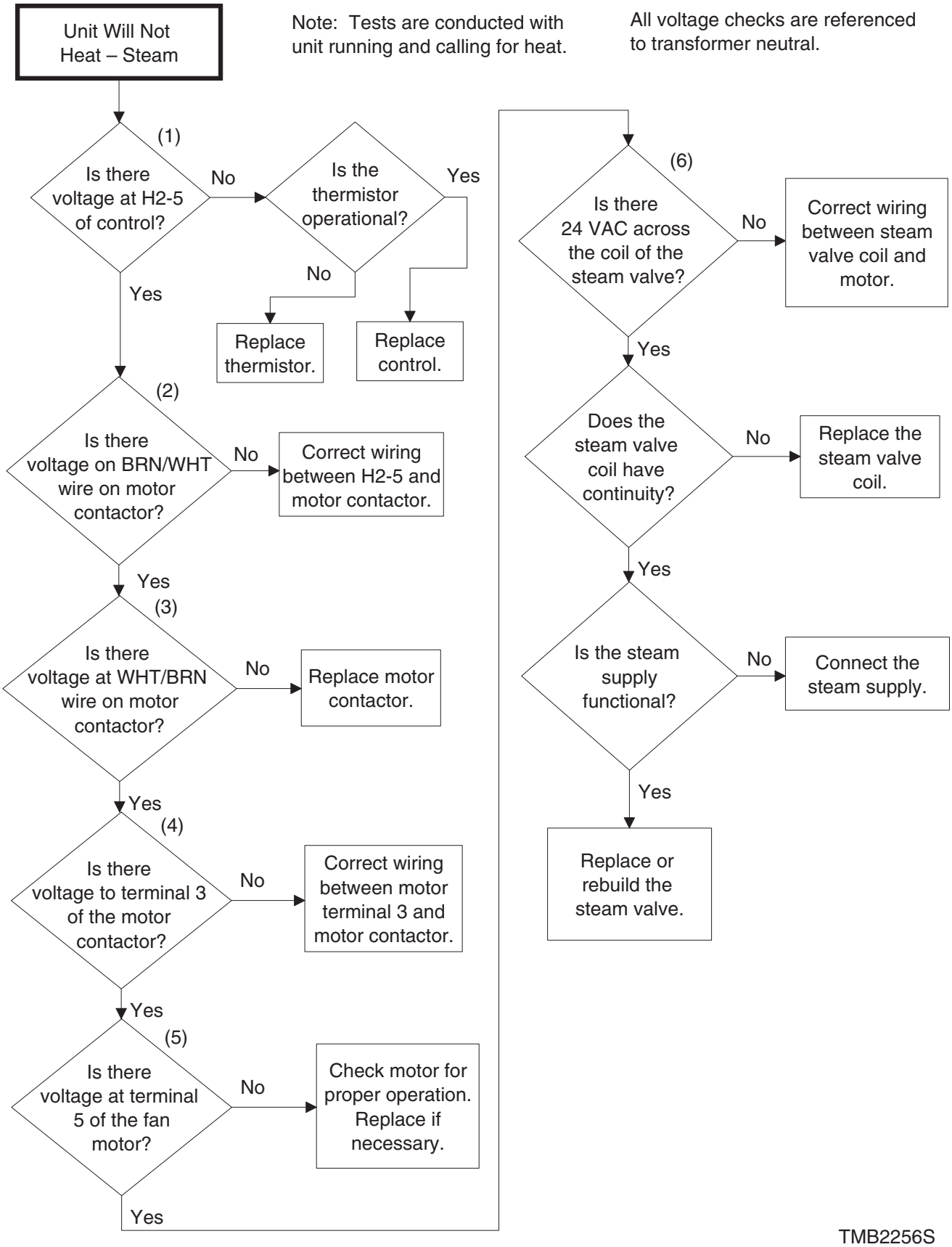
Please see following page for wiring diagram information.

Unit Will Not Heat – Gas



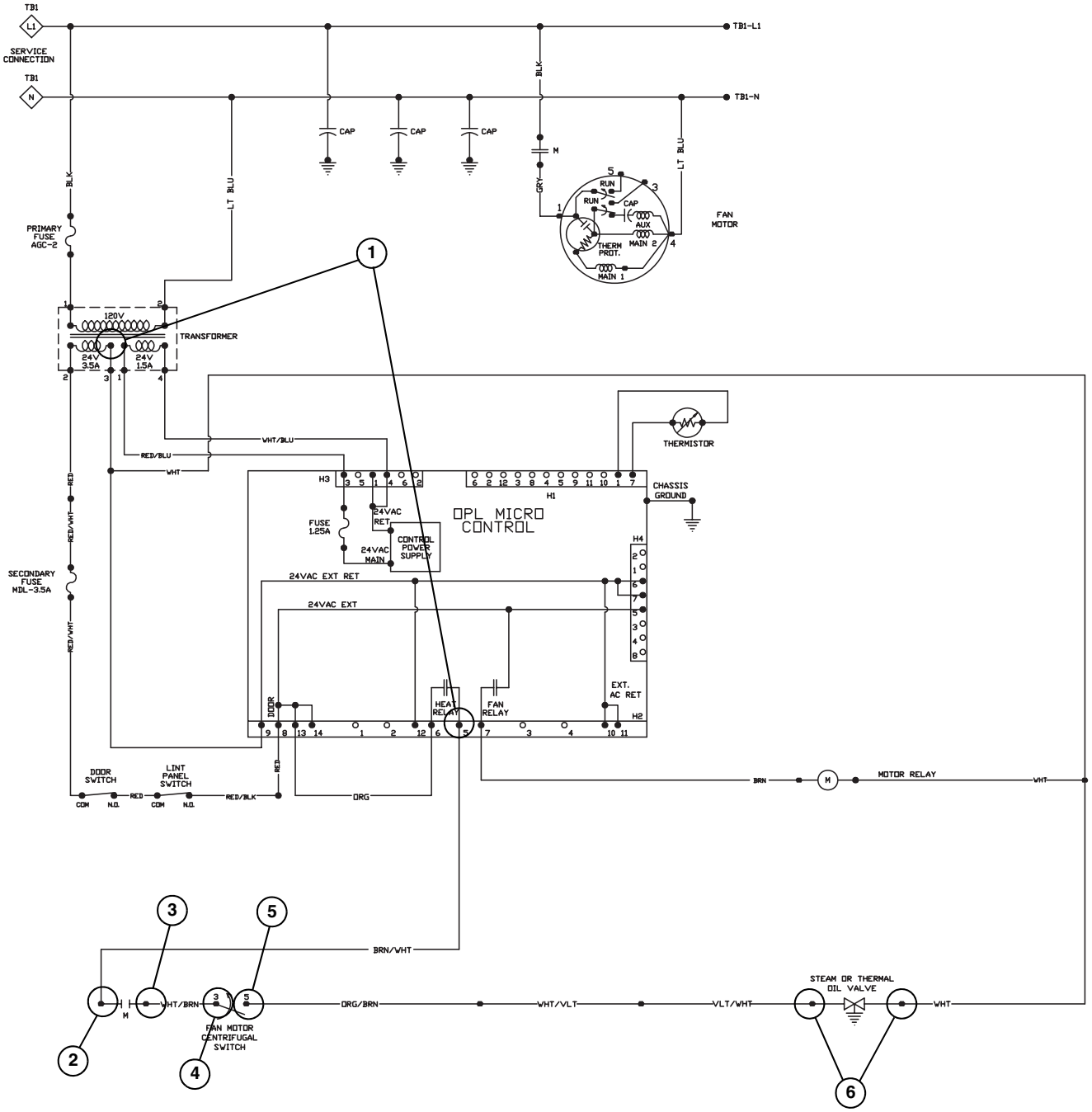
TMB2242S

63. Unit Will Not Heat – Steam



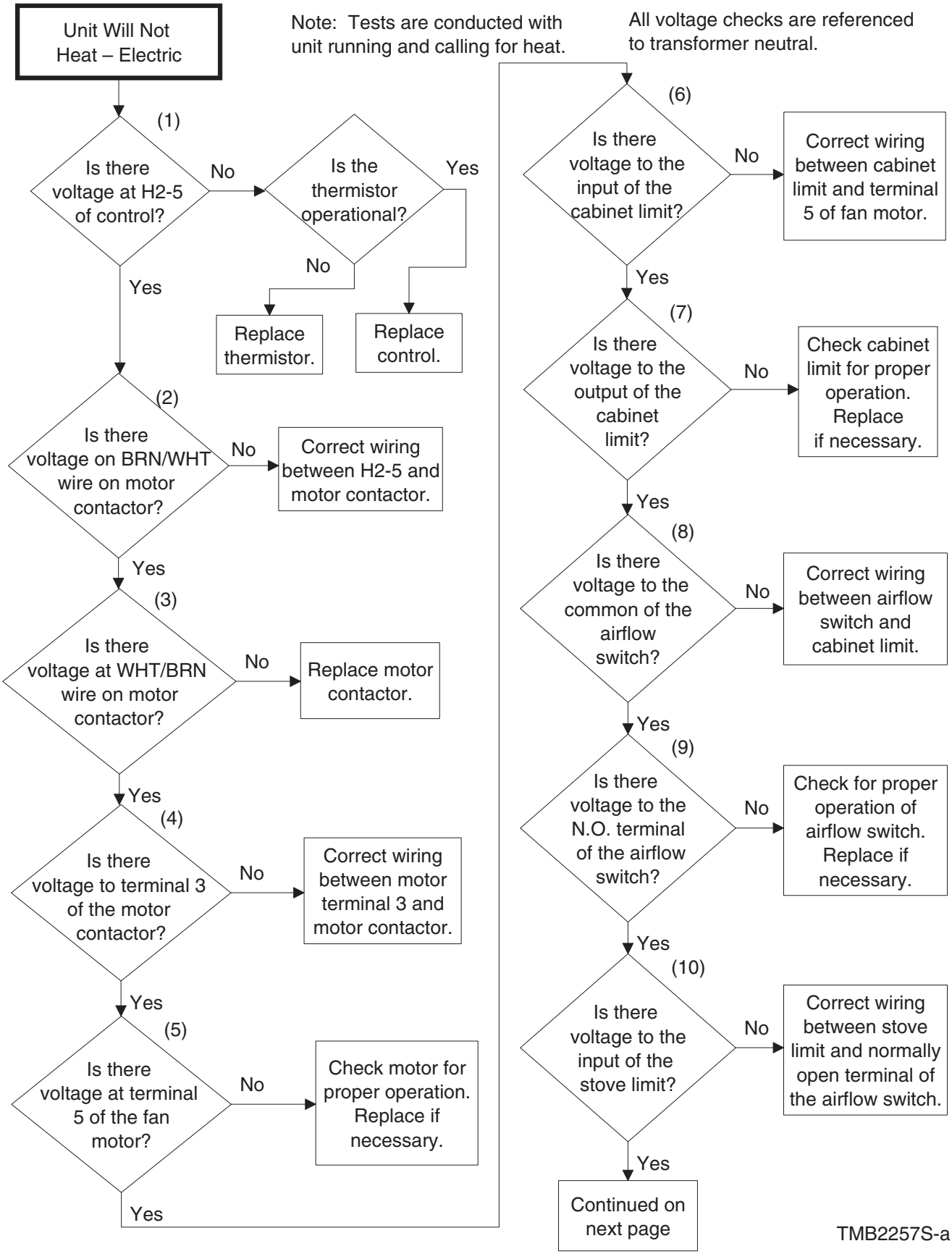
TMB2256S

Unit Will Not Heat – Steam

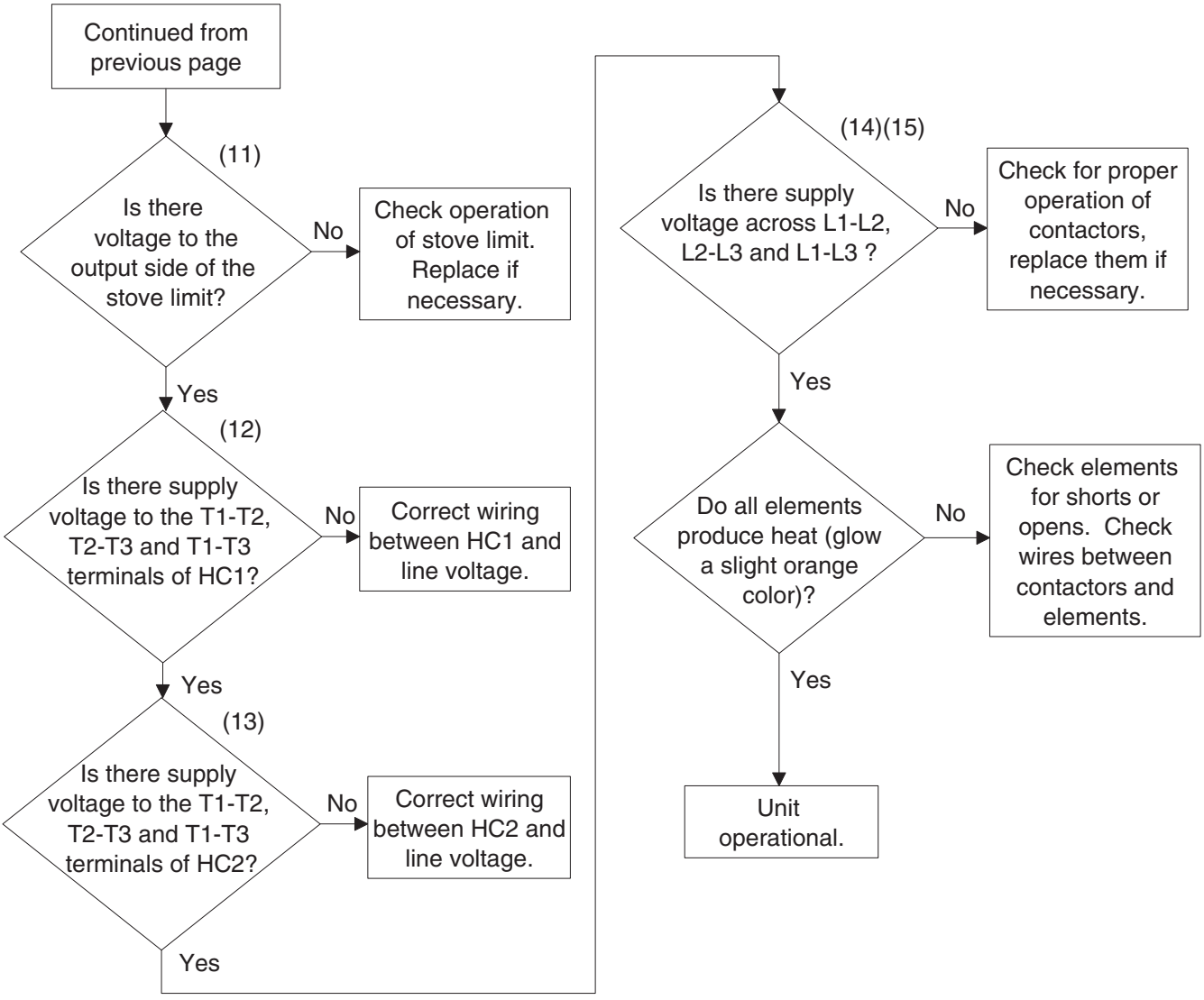


TMB2246S

64. Unit Will Not Heat – Electric



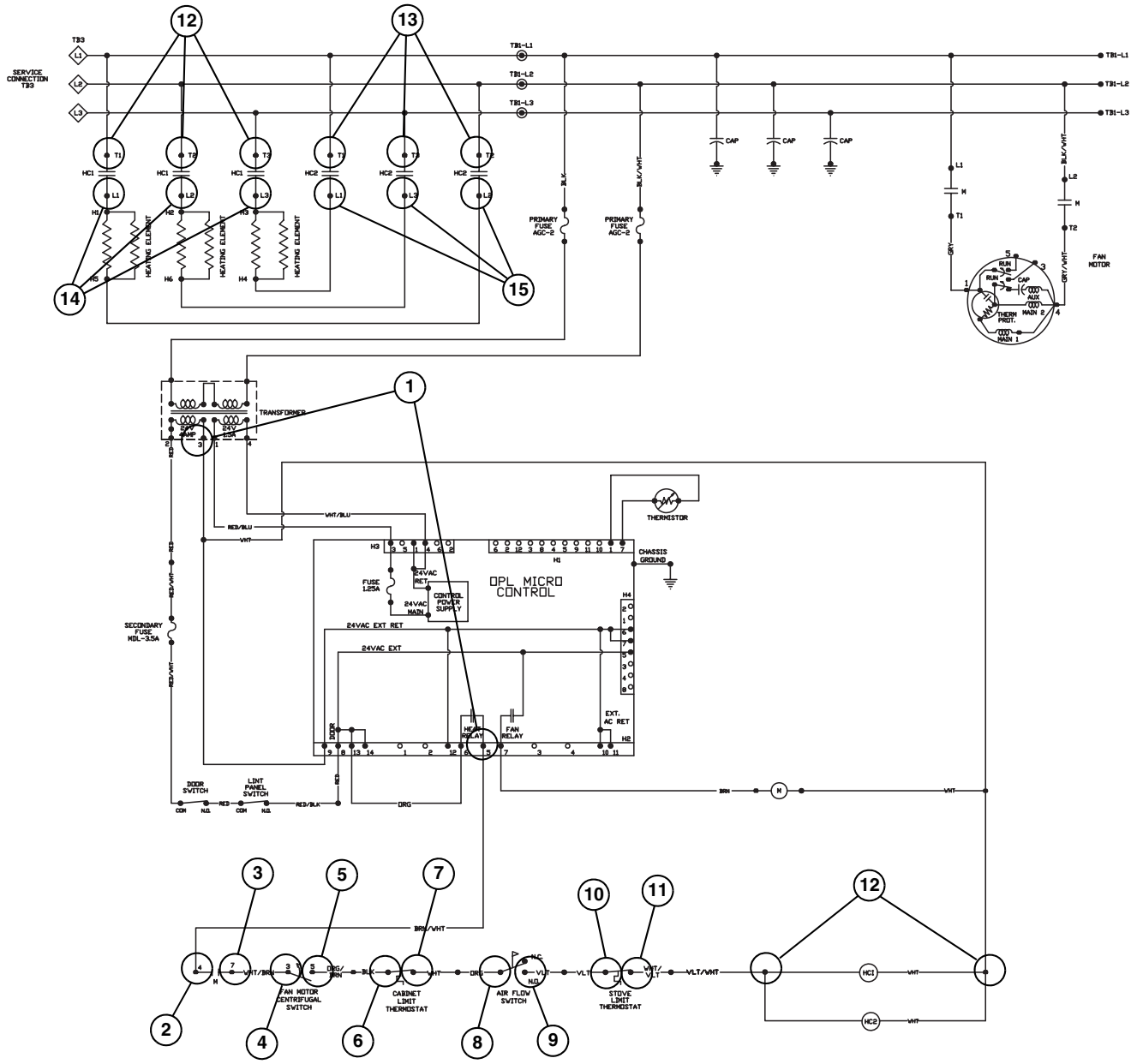
64. Unit Will Not Heat – Electric (continued)



TMB2257S-b

Please see following page for wiring diagram information.

Unit Will Not Heat – Electric



TMB2247S

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the dryer(s) before servicing.**
- **Close gas shut-off valve to gas dryer(s) before servicing.**
- **Never start the dryer(s) with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the dryer is properly grounded.**

W001R1

65. Error Codes

OP - Indicates physical "open" in the thermistor circuit. Possible causes are: 1) thermistor, 2) wiring between control and thermistor, 3) control.
SH - Indicates a "short" in the thermistor circuit. Possible causes are: 1) shorted thermistor, 2) a short in the wiring between control and thermistor, 3) control.

Display	Definition	Corrective Action
OP	Indicates an open circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Indicates a short circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.

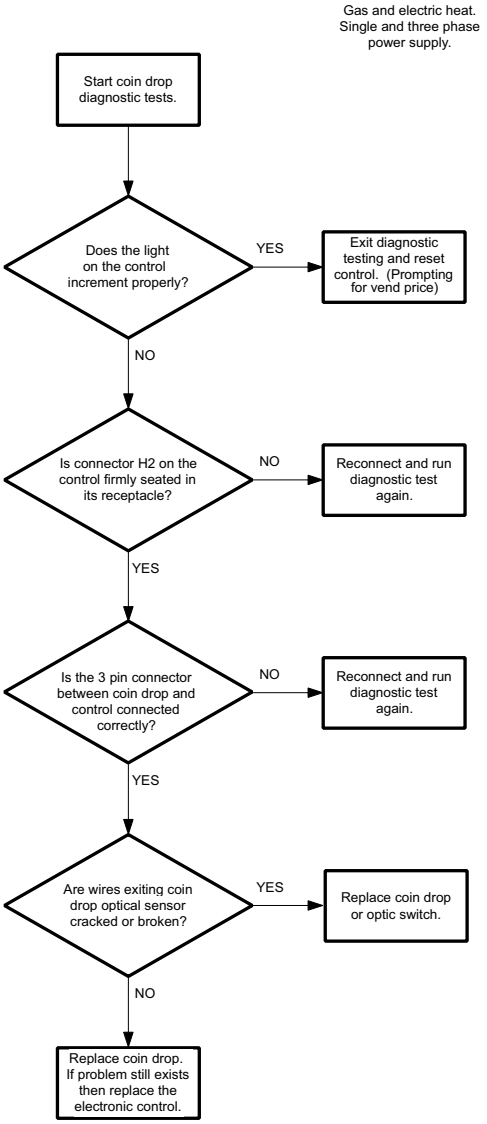
Section 8
Hybrid Timer Control Troubleshooting

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

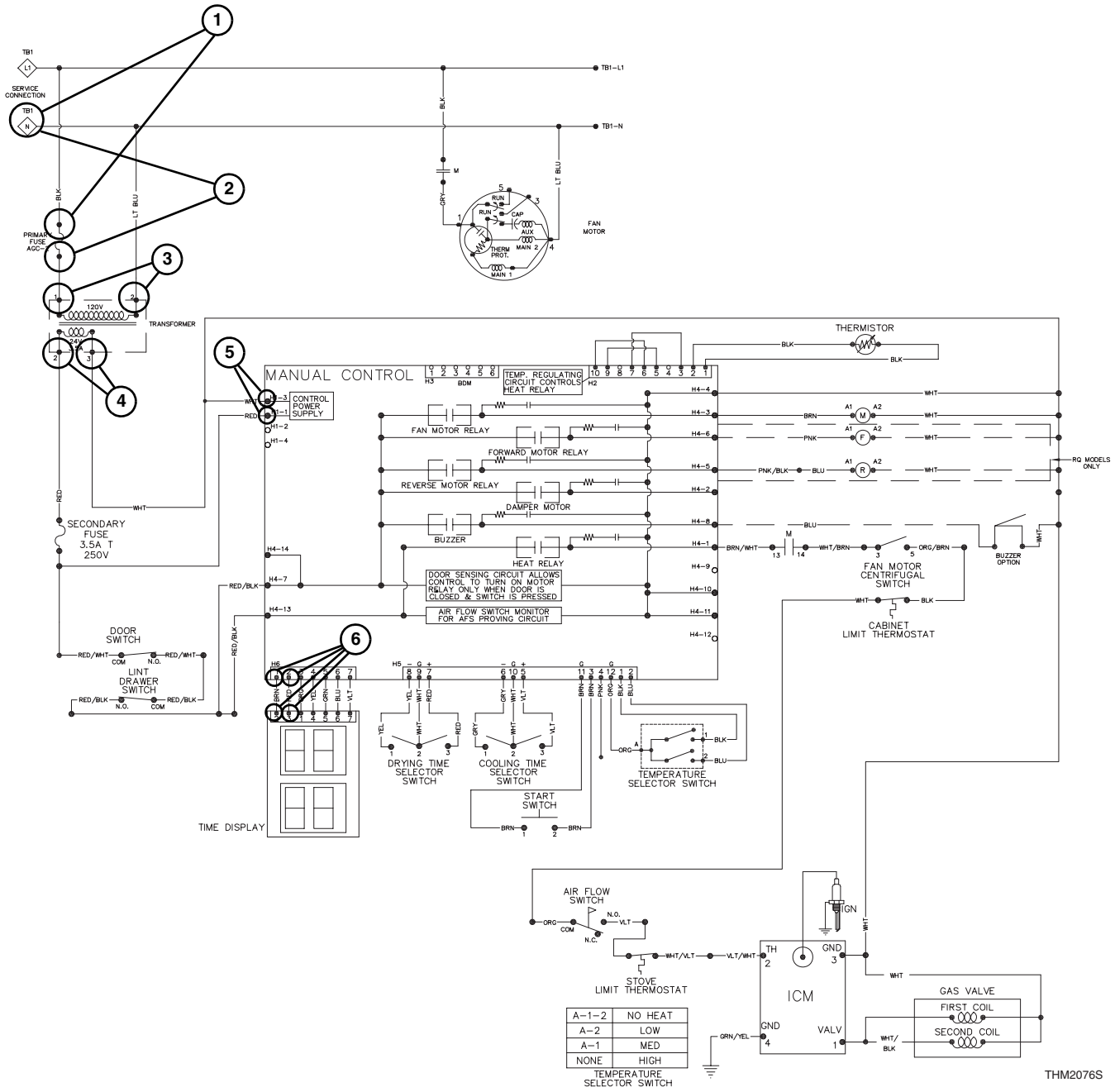
66. Coins Ignored When Entered



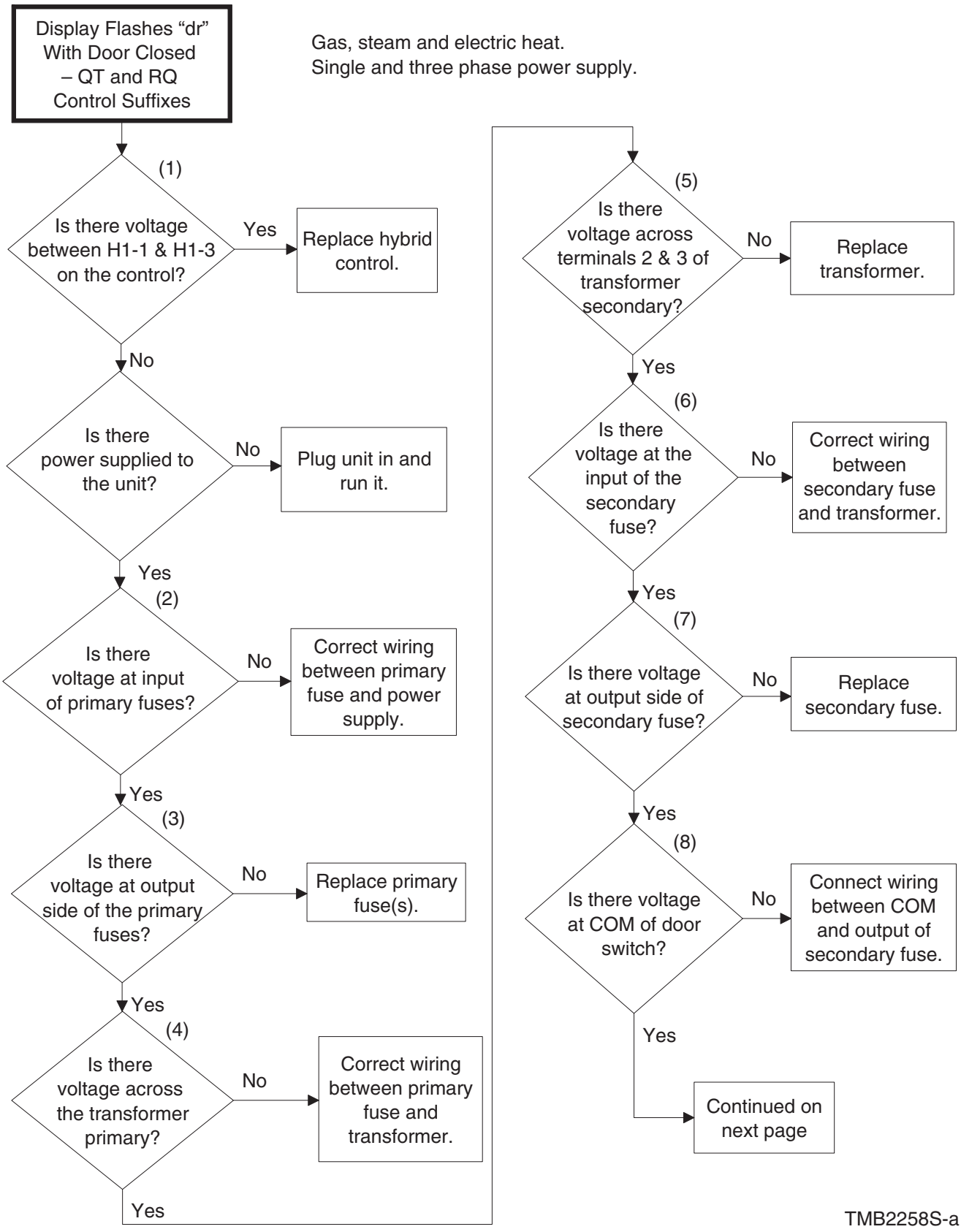
TMB2051S

67. Control Has No Display – QT and RQ Control Suffixes

Control Has No Display – QT and RQ Control Suffixes

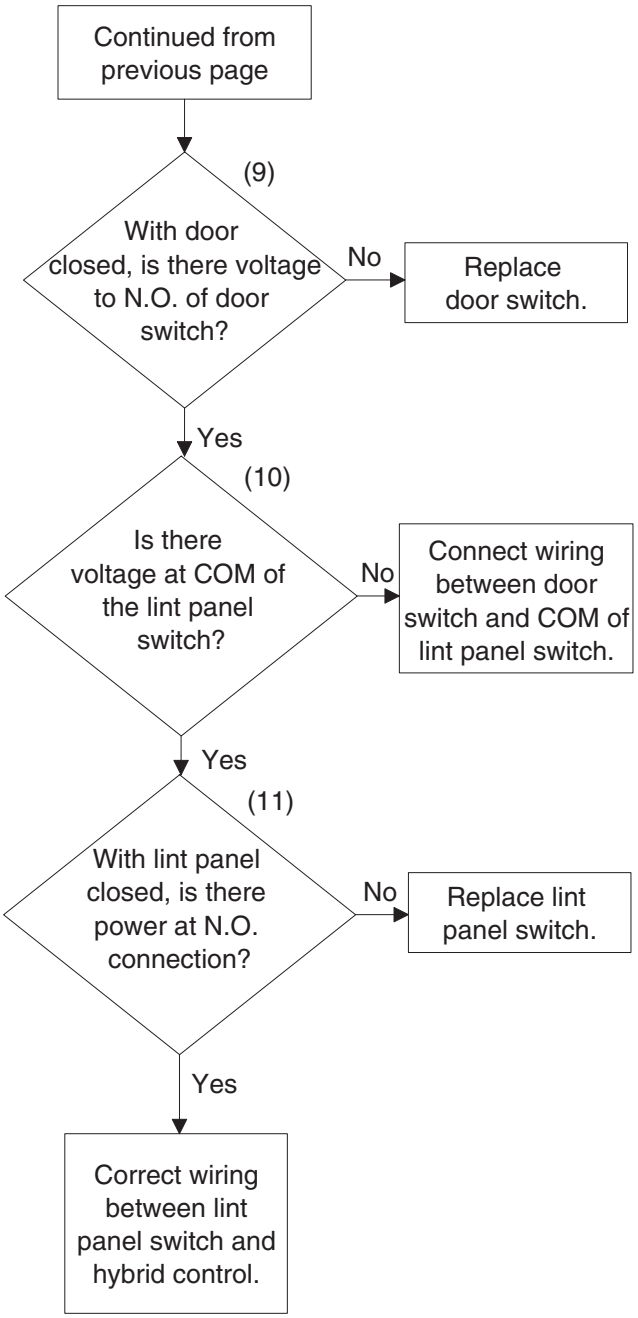


68. Display Flashes “dr” With Door Closed – QT and RQ Control Suffixes



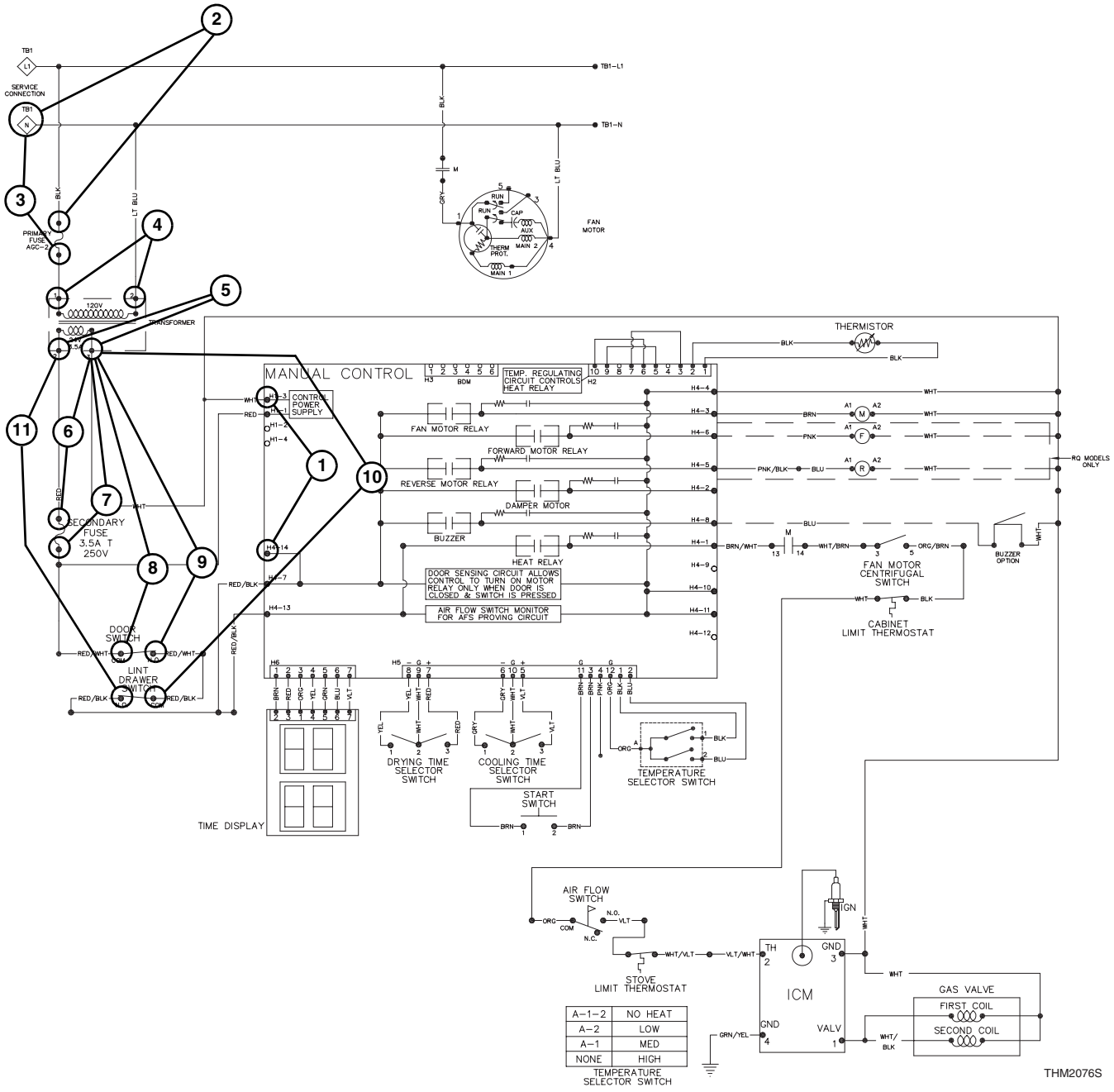
TMB2258S-a

68. Display Flashes “dr” With Door Closed – QT and RQ Control Suffixes (continued)

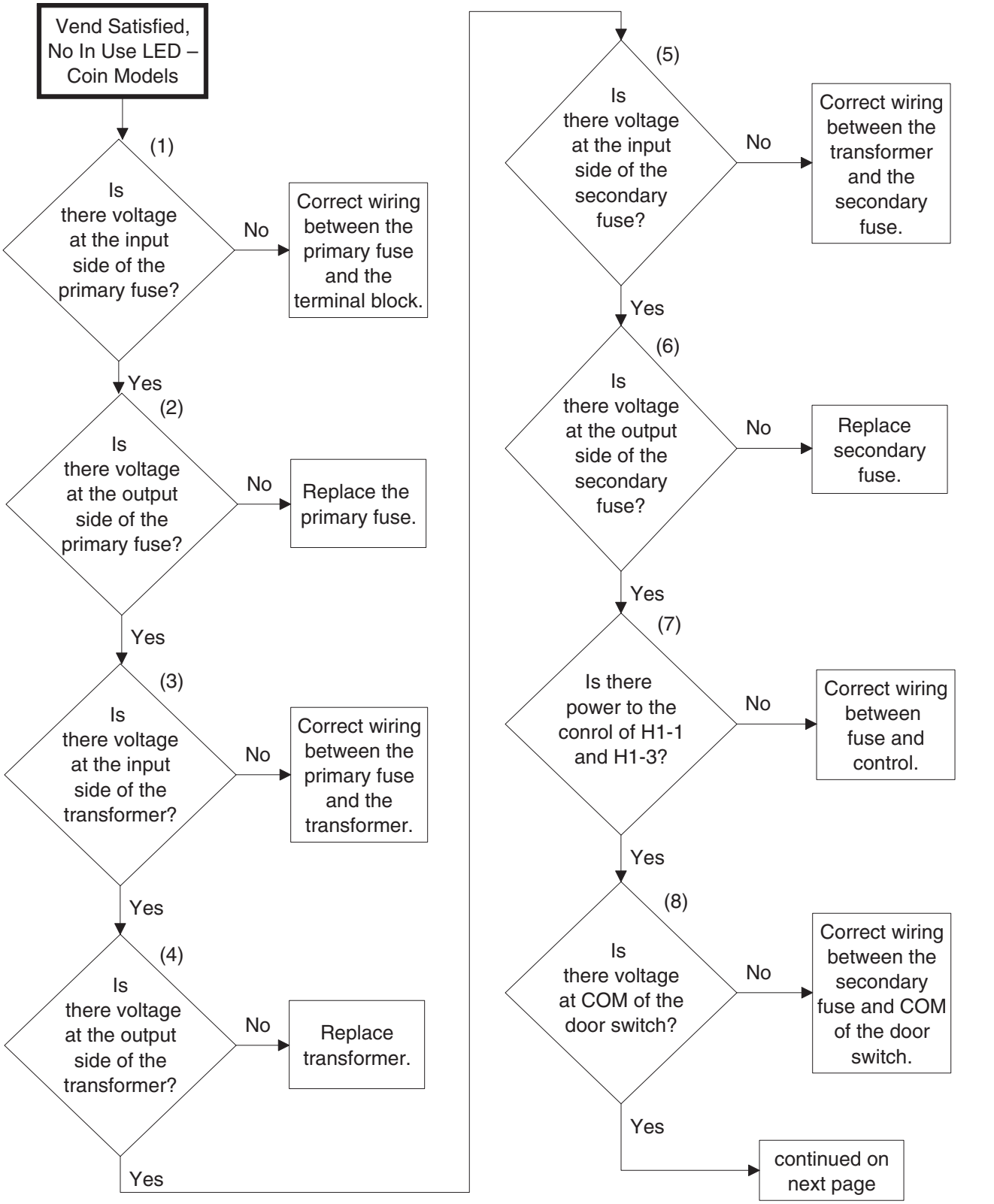


TMB2258S-b

Display Flashes “dr” With Door Closed – QT and RQ Control Suffixes

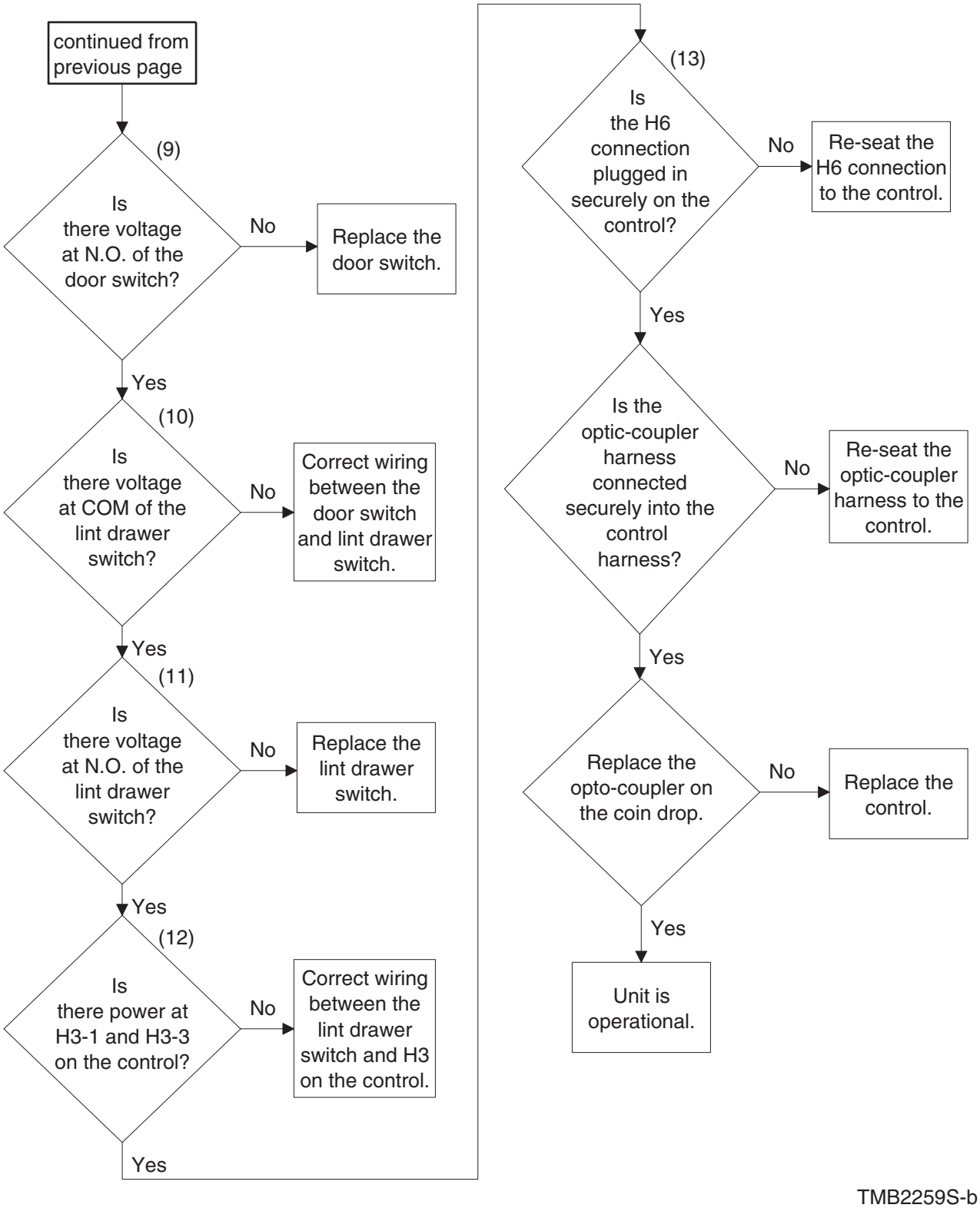


69. Vend Satisfied, No In Use LED – SD and SX Control Suffixes



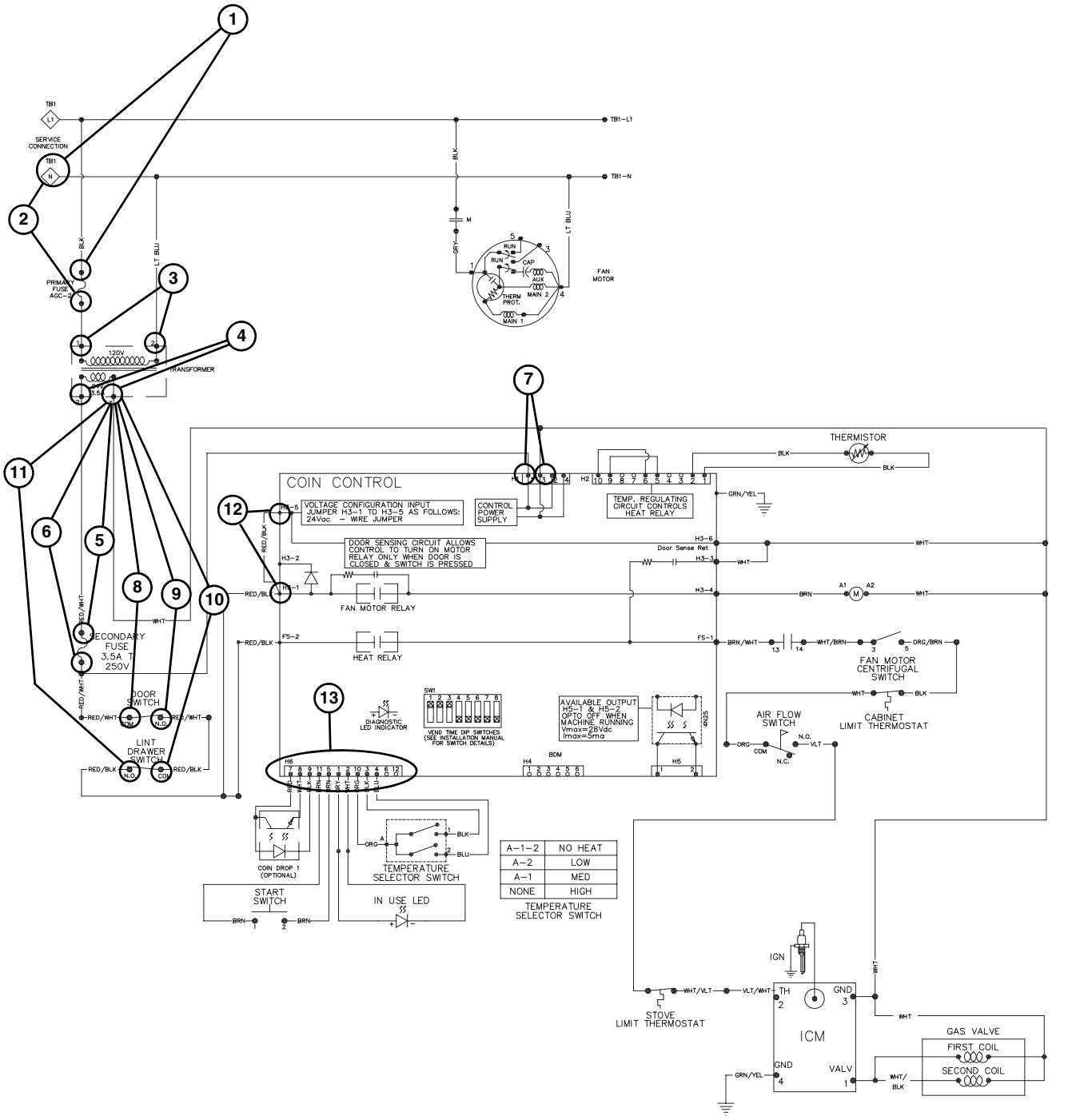
TMB2259S-a

69. Vend Satisfied, No In Use LED – SD and SX Control Suffixes (continued)

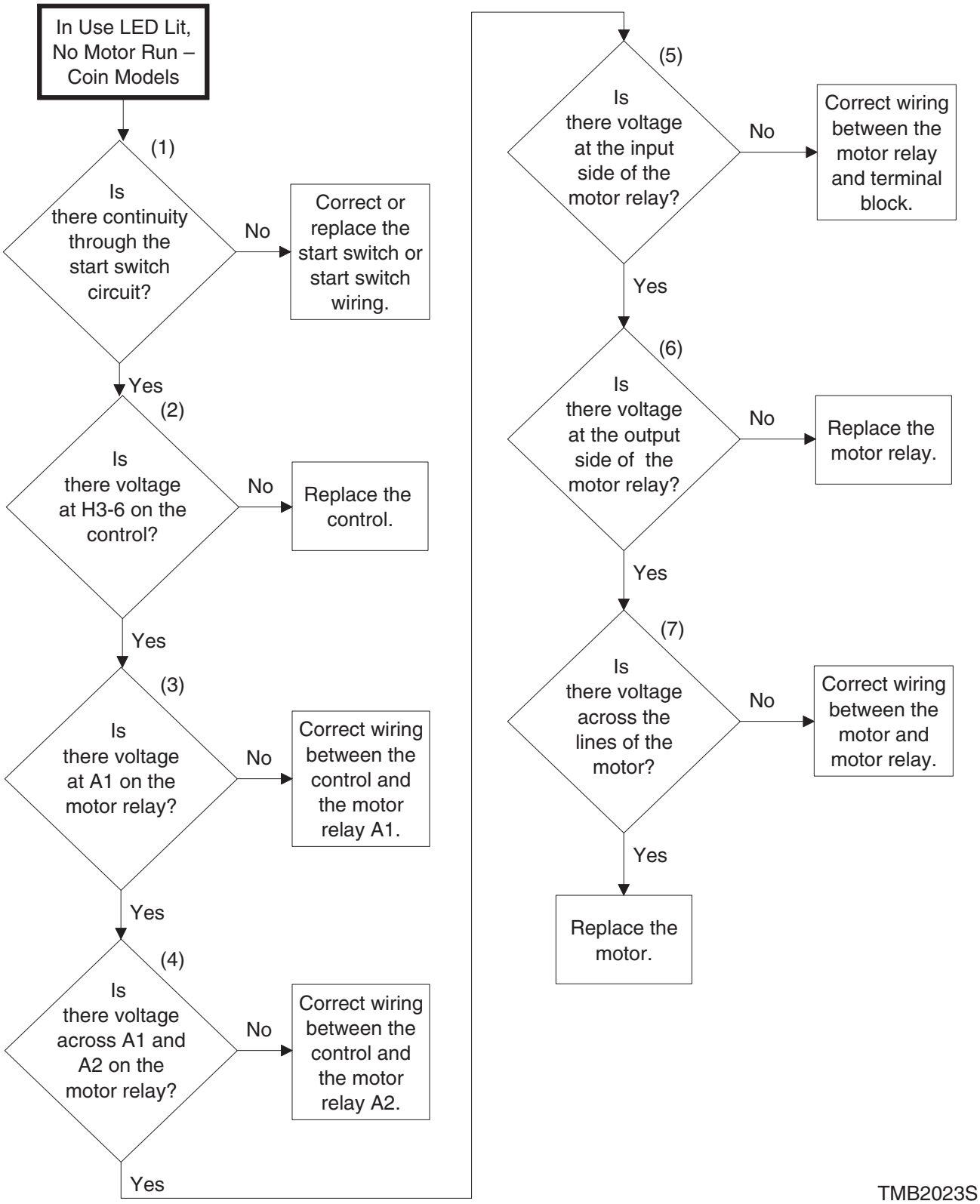


TMB2259S-b

Vend Satisfied, No In Use LED – SD and SX Control Suffixes

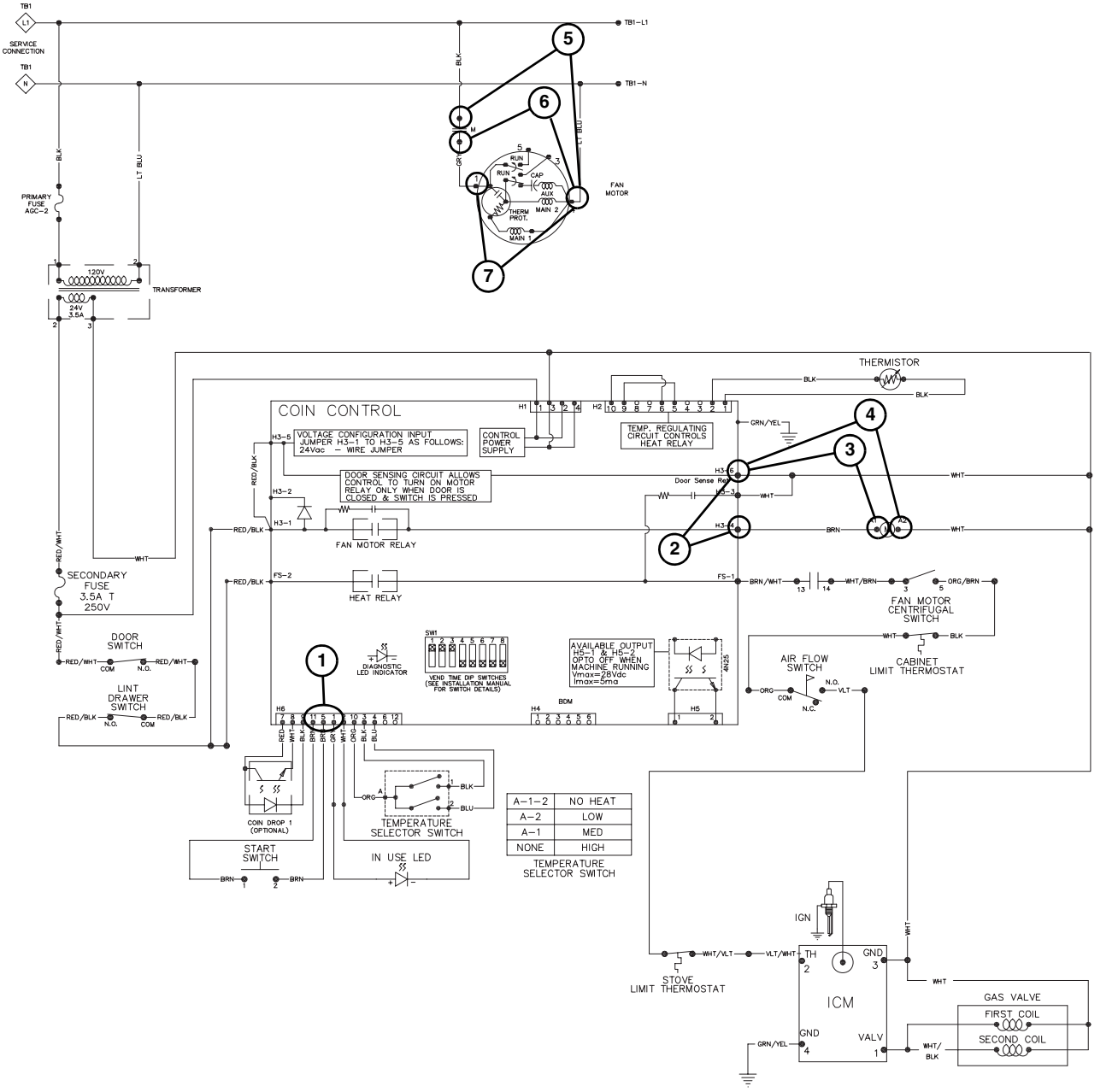


70. In Use LED Lit, No Motor Run – SD and SX Control Suffixes



TMB2023S

In Use LED Lit, No Motor Run – SD and SX Control Suffixes



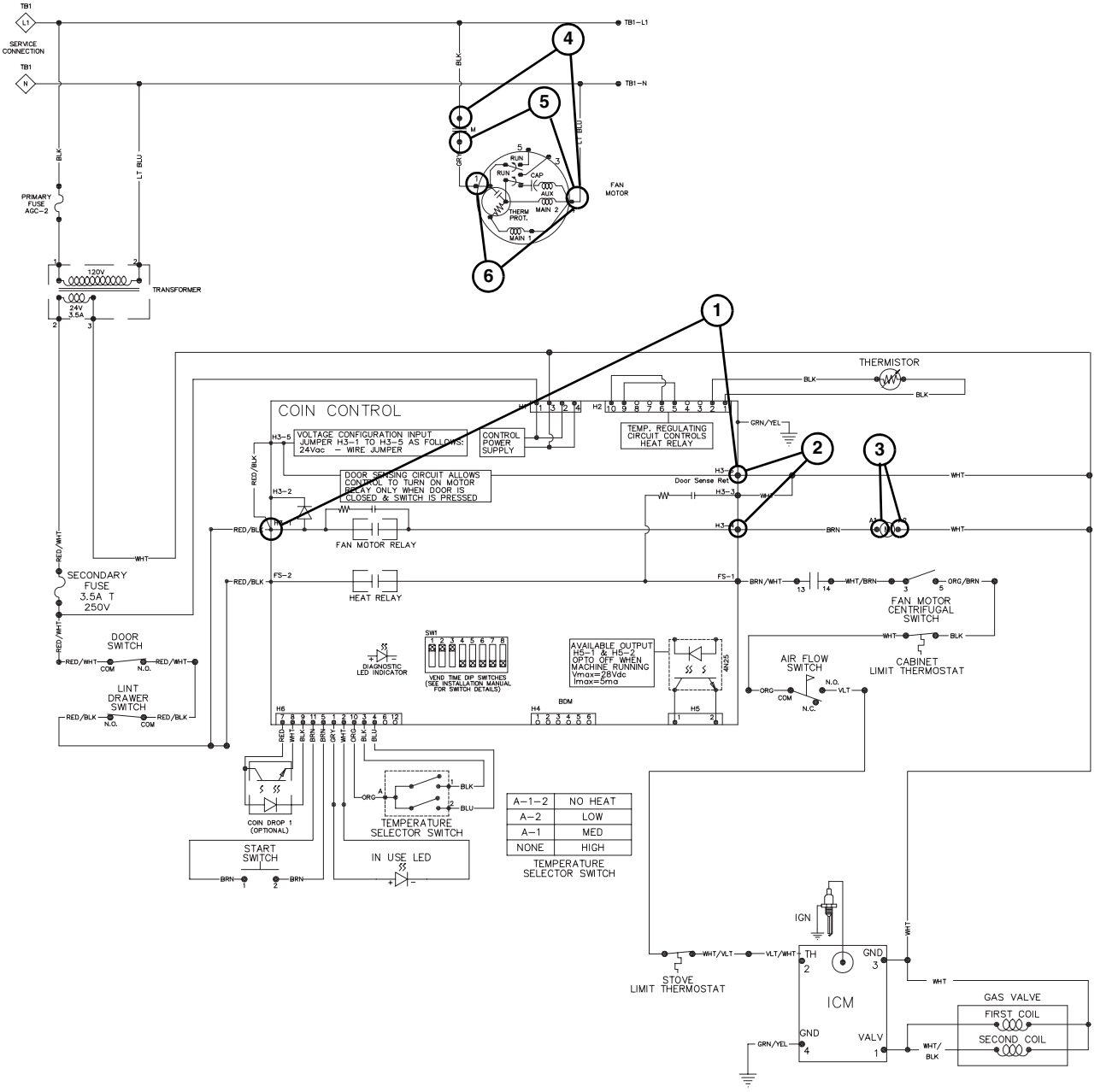
THM2075S

71. Motor Will Not Start/Run – SD and SX Control Suffixes

TMB2077S

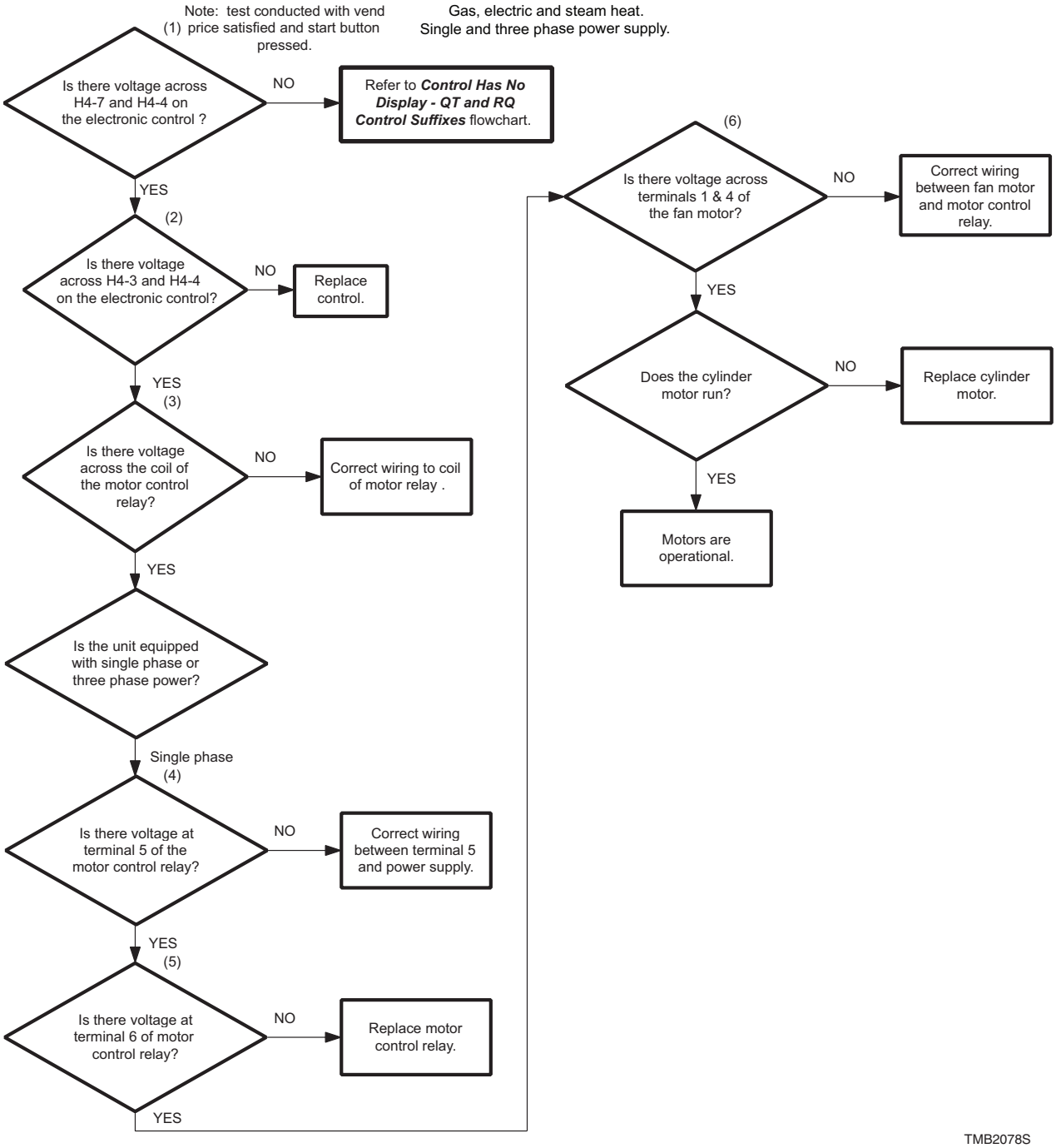
Please see following page for wiring diagram information.

Motor Will Not Start/Run – SD and SX Control Suffixes



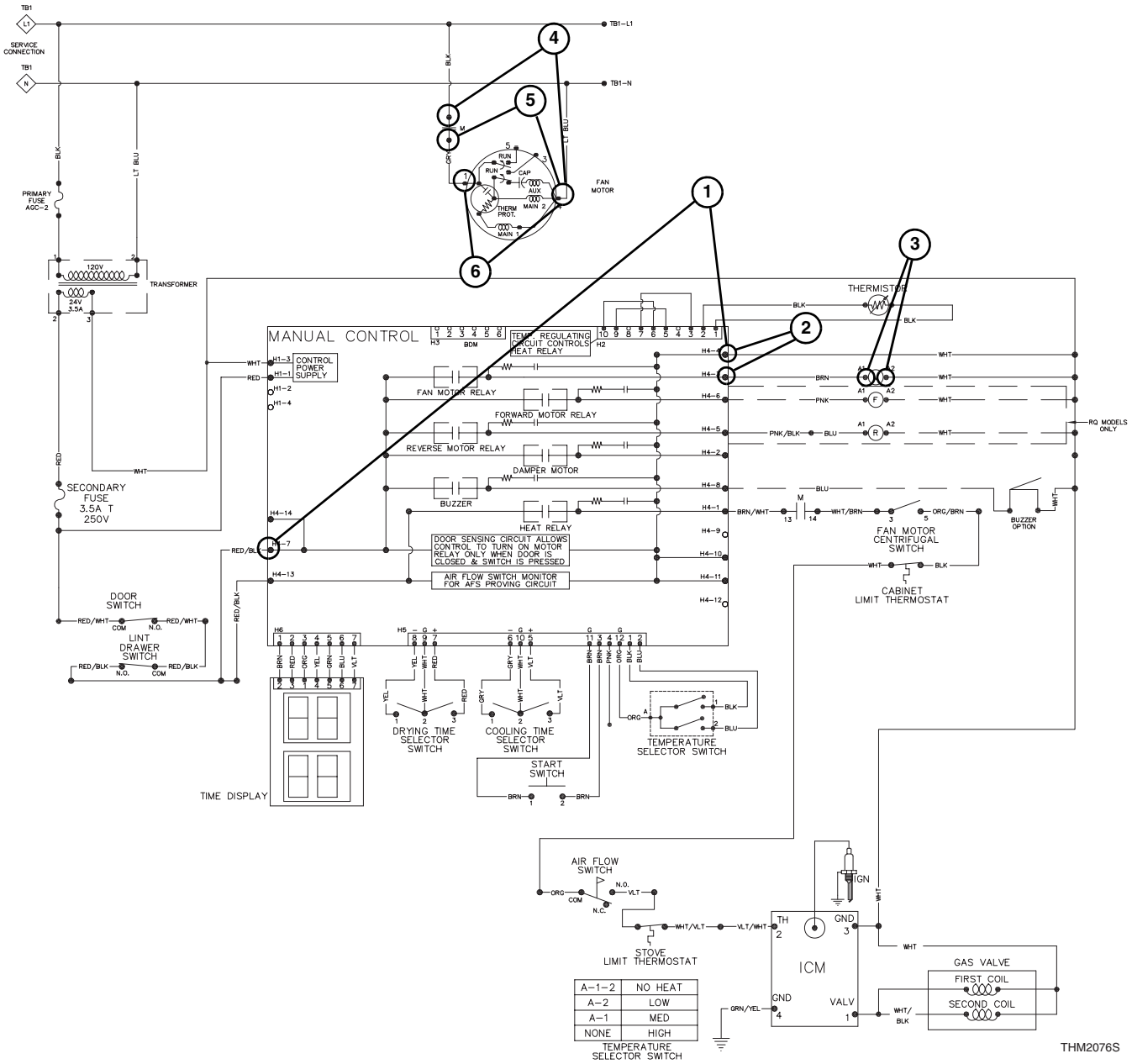
THM2075S

72. Motor Will Not Start/Run – QT and RQ Control Suffixes

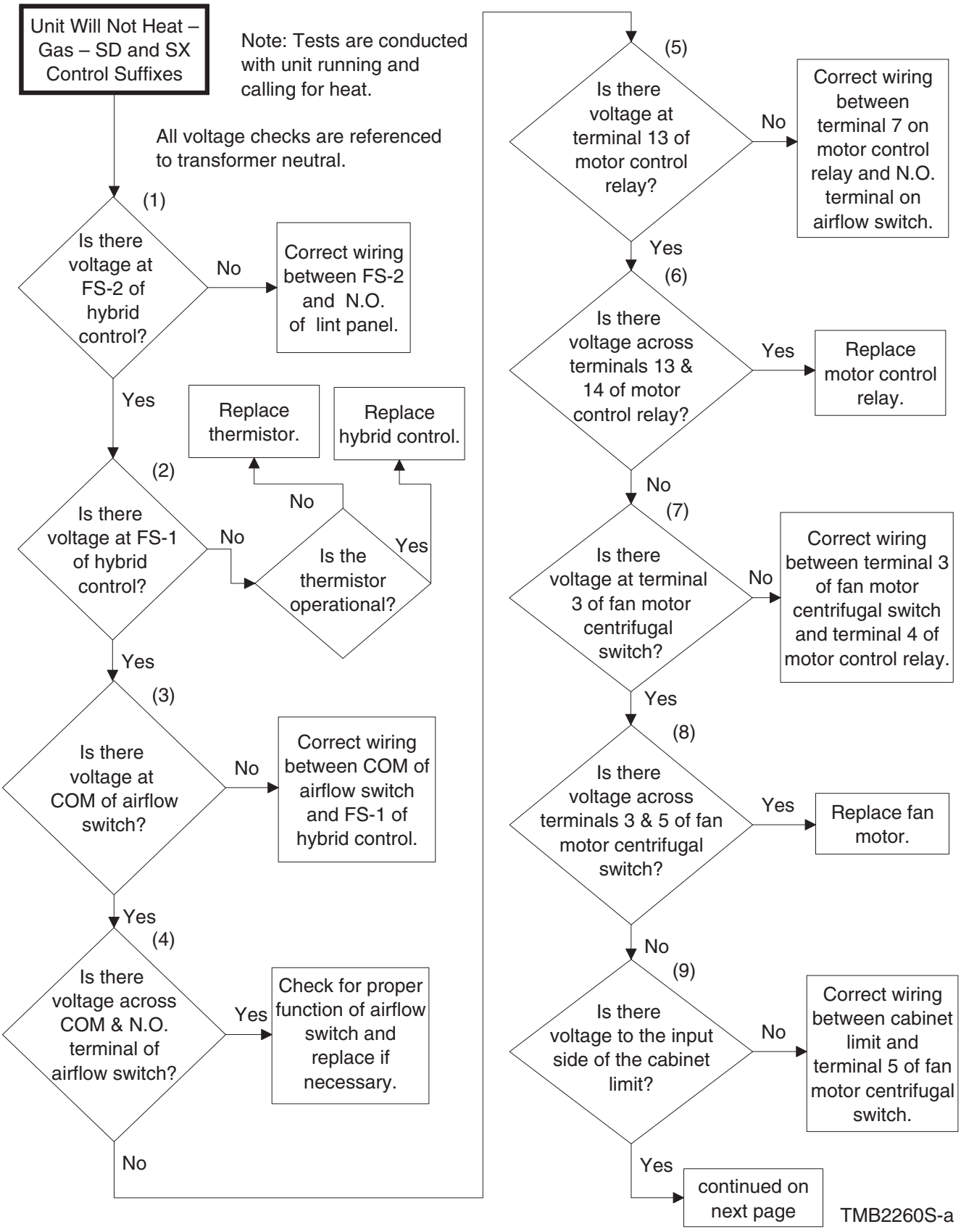


Please see following page for wiring diagram information.

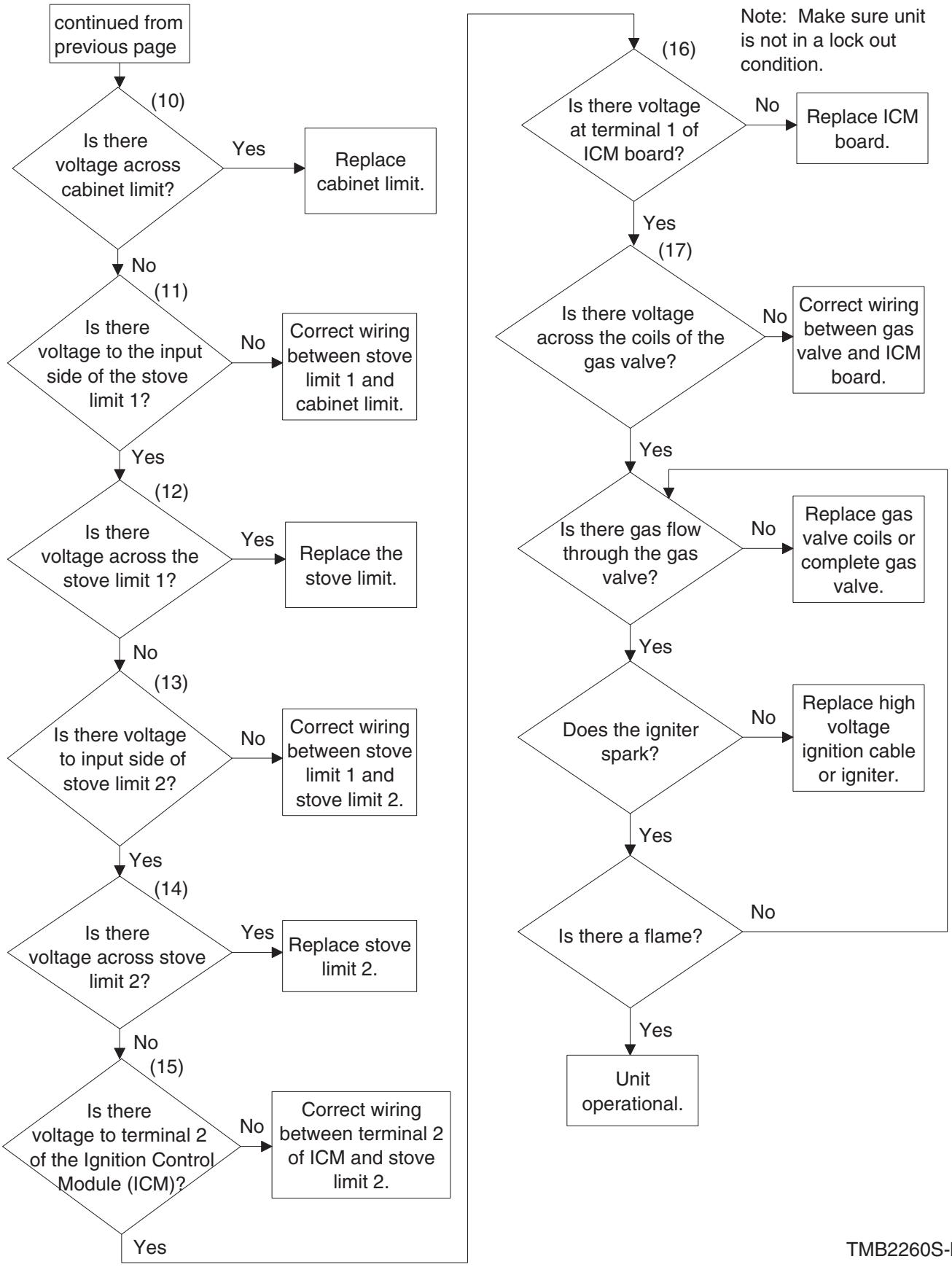
Motor Will Not Start/Run – QT and RQ Control Suffixes



73. Unit Will Not Heat – Gas – SD and SX Control Suffixes

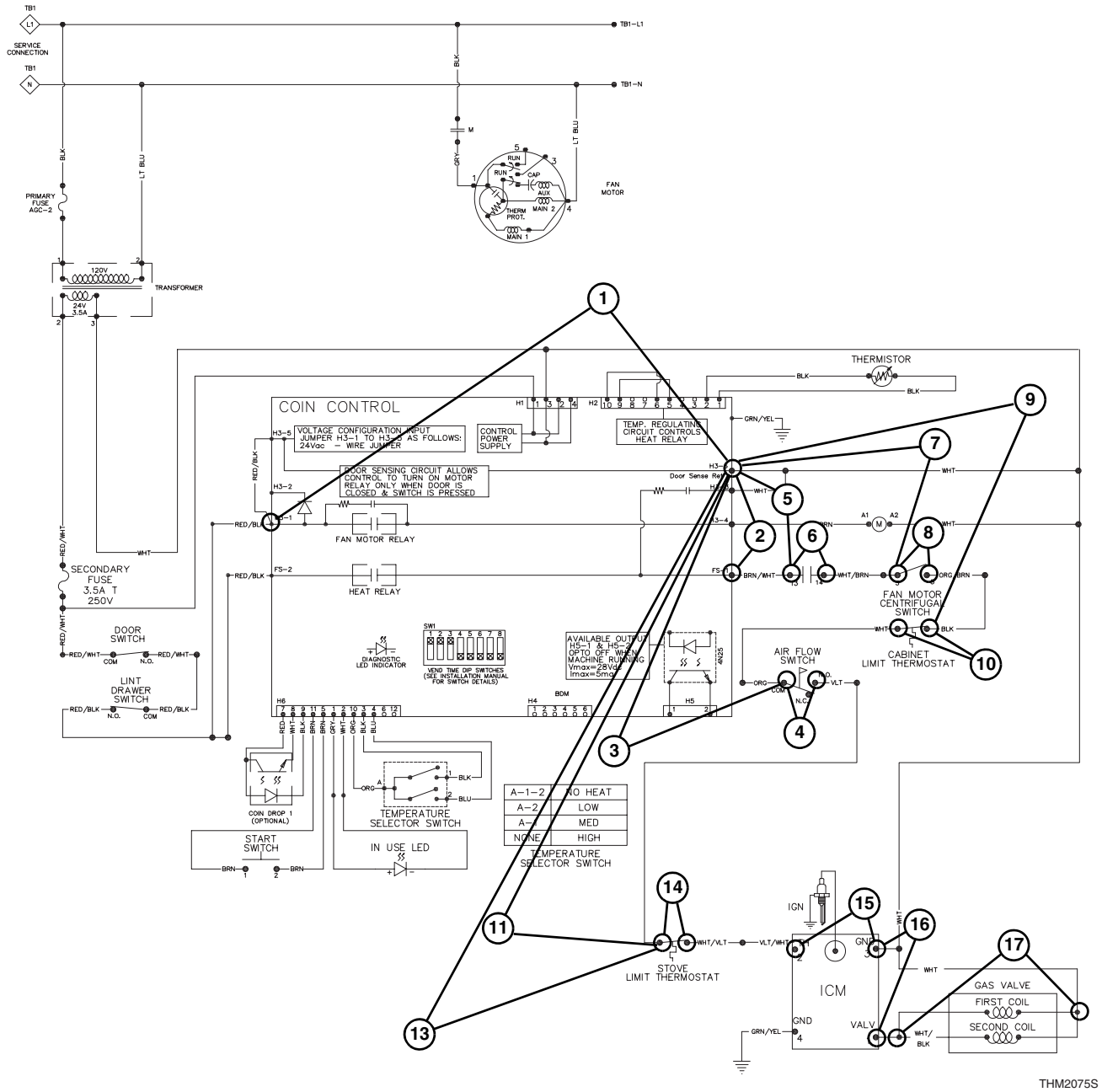


73. Unit Will Not Heat – Gas – SD and SX Control Suffixes (continued)



TMB2260S-b

Unit Will Not Heat – Gas – SD and SX Control Suffixes

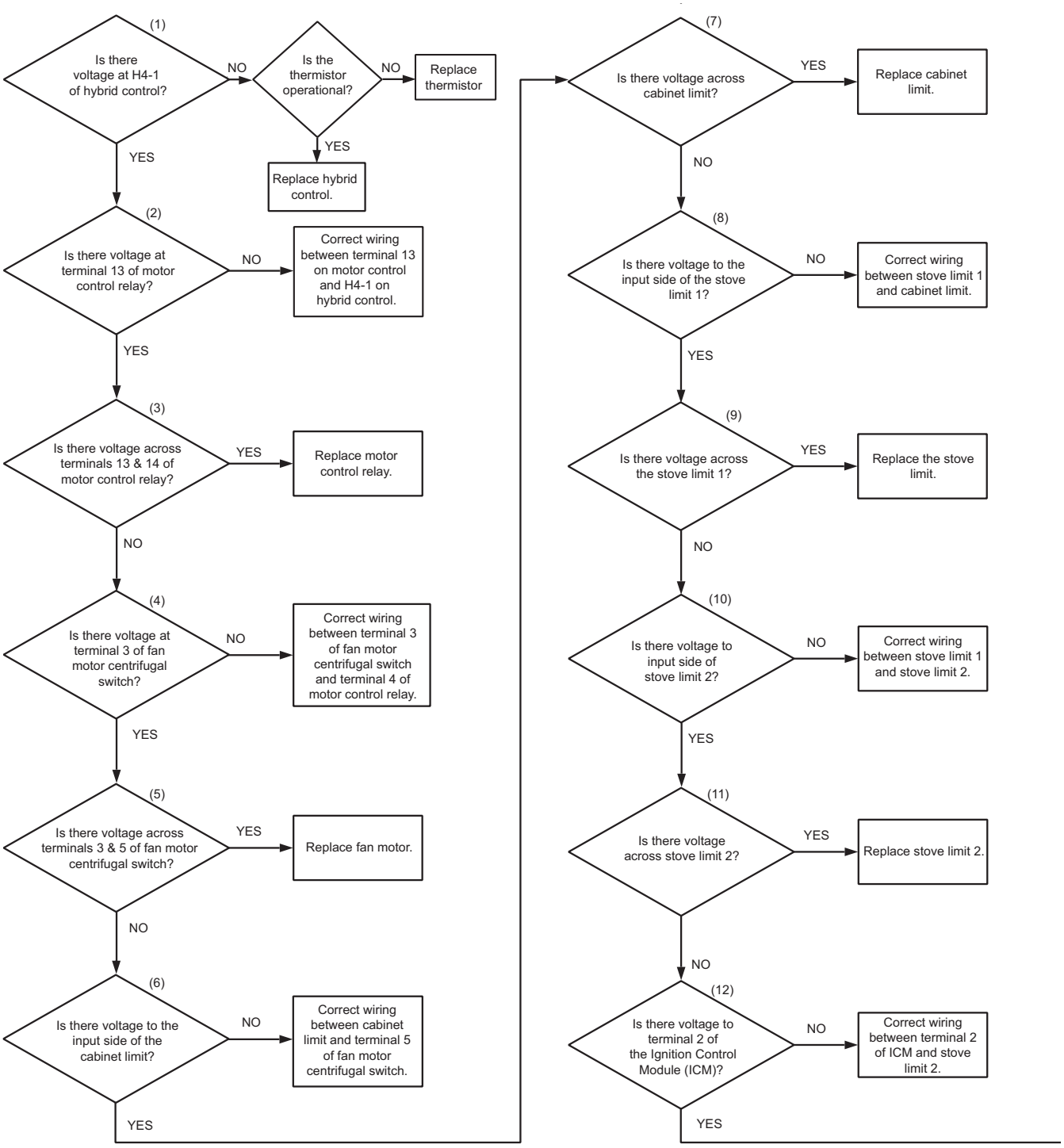


THM2075S

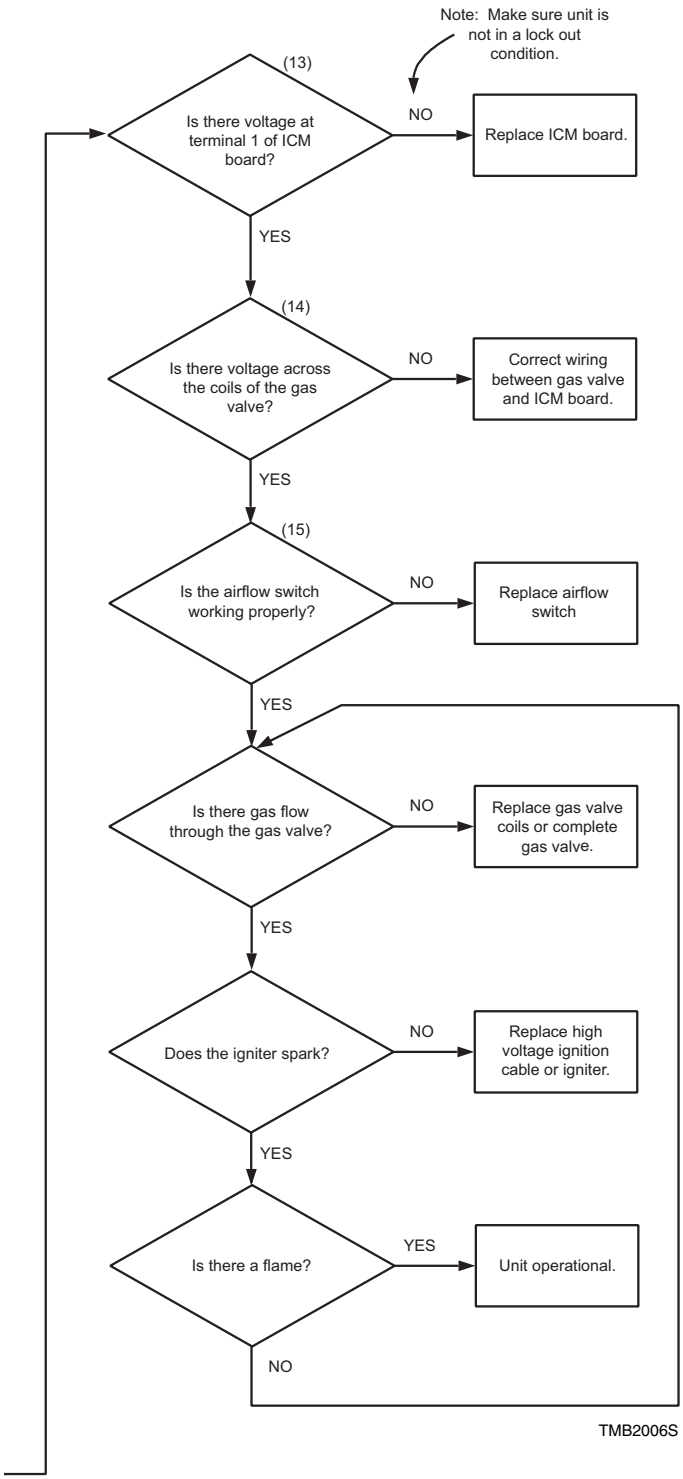
74. Unit Will Not Heat – Gas – QT and RQ Control Suffixes

Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.

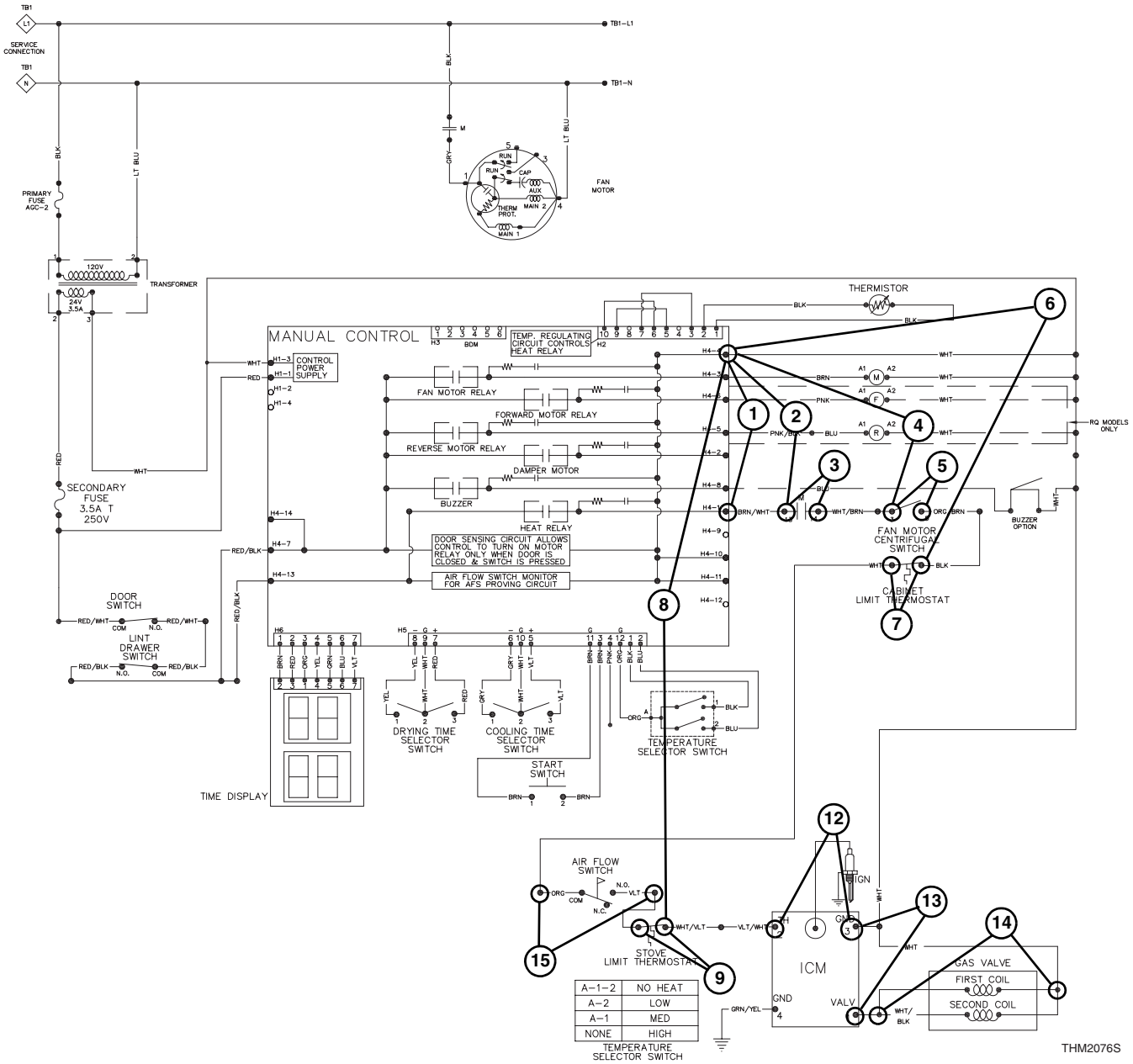


74. Unit Will Not Heat – Gas – QT and RQ Control Suffixes (continued)

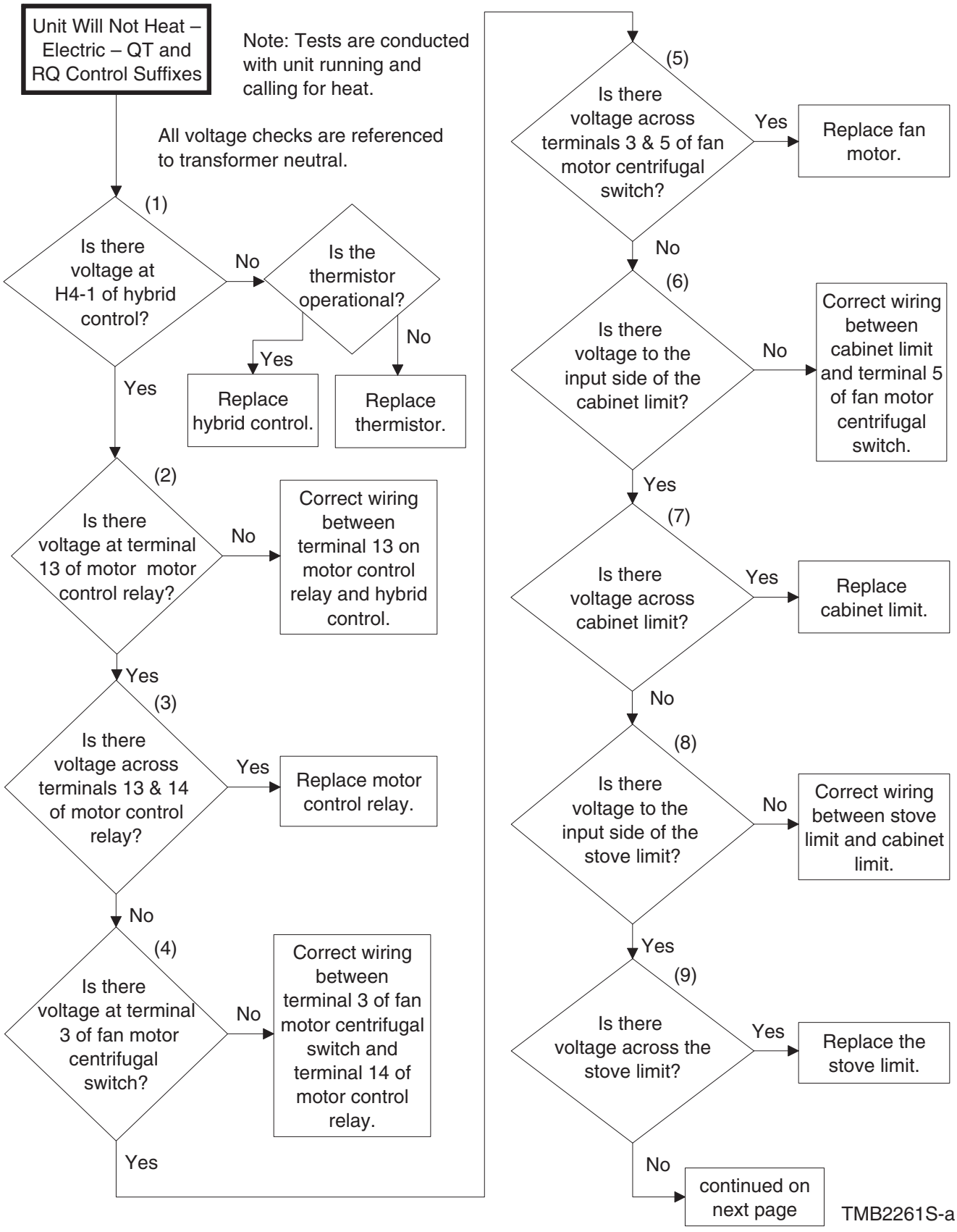


Please see following page for wiring diagram information.

Unit Will Not Heat – Gas – QT and RQ Control Suffixes

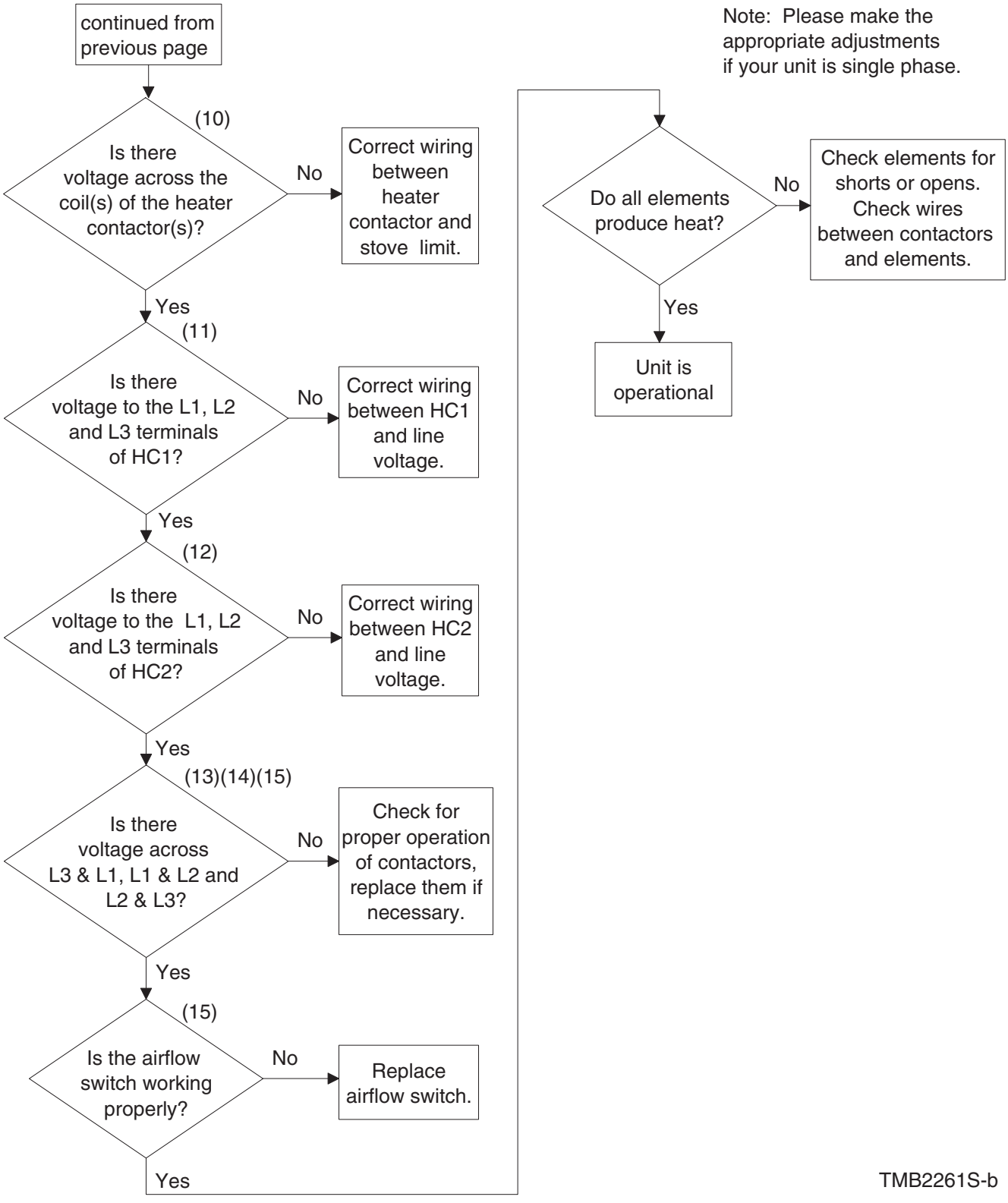


75. Unit Will Not Heat – Electric – QT and RQ Control Suffixes



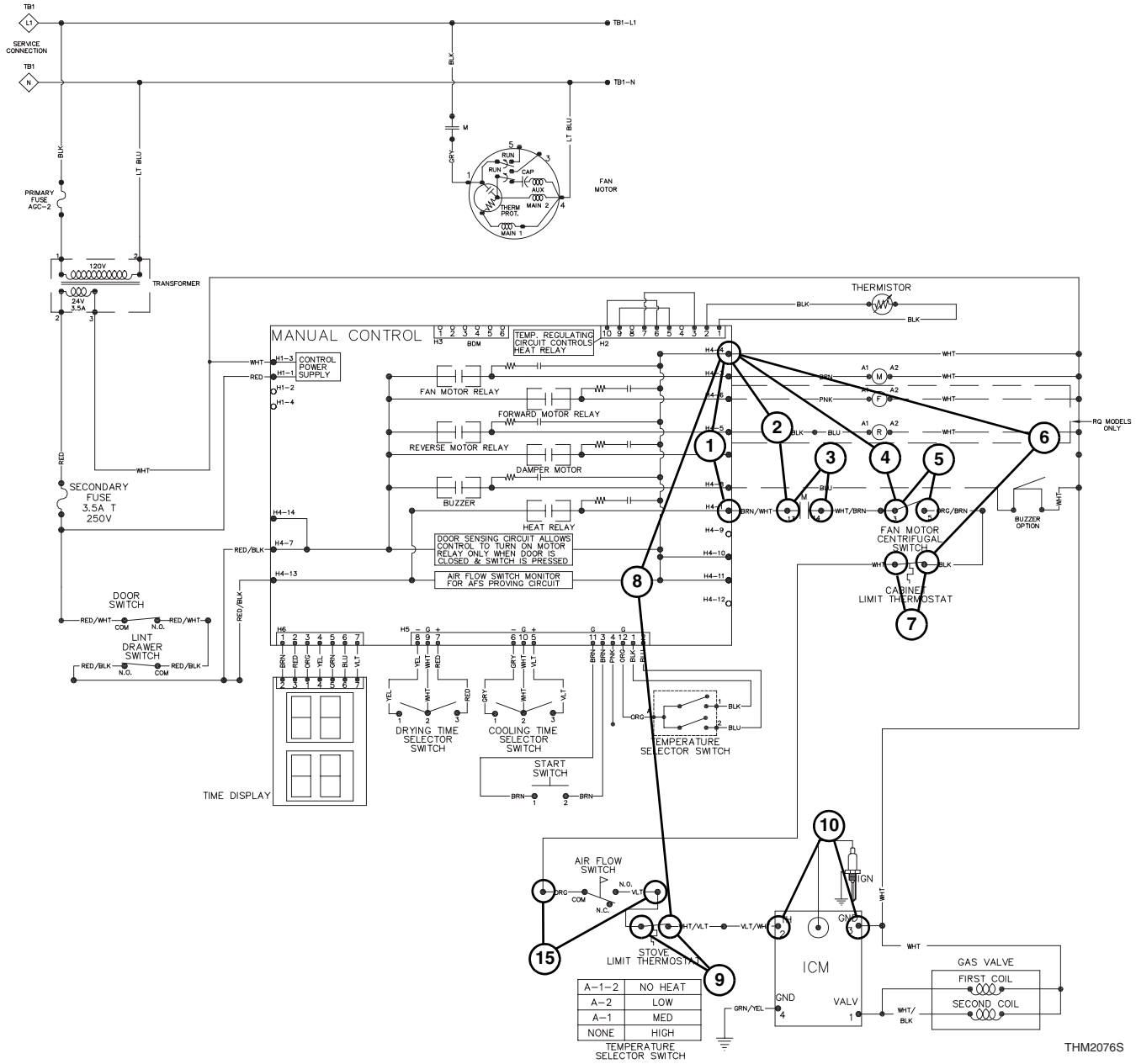
TMB2261S-a

75. Unit Will Not Heat – Electric – QT and RQ Control Suffixes (continued)



Please see following page for wiring diagram information.

Unit Will Not Heat – Electric – QT and RQ Control Suffixes



WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

76. Error Codes

Display	Definition	Corrective Action
OP	Open thermistor error.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Shorted thermistor error.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
AF-1	Airflow switch closed when cycle started.	• Check airflow switch. Replace if inoperative.
AF-2	Airflow switch failed to closed after cycle started.	• Check airflow switch. Replace if inoperative.
AF (flashing)	Airflow stich opened/closed 5 or more times in a running cycle.	• Check airflow switch. Replace if inoperative.